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of the **AMERICAN PHARMACEUTICAL ASSOCIATION**

Practical Pharmacy Edition

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Calendar of Events

NOVEMBER

9–11 Pharmaceutical Manufacturers' Assn., biological section, The Cloister, Sea Island, Ga.
13–19 Diabetes Week
14–16 Pharmaceutical Manufacturers' Assn., research and development section, The Cloister, Sea Island, Ga.
16–19 National Assn. for Mental Health meeting, Denver Hilton Hotel, Denver, Colo.
23–24 Ninth Annual Post-Graduate Pharmacy Refresher Course, Univ. of Texas College of Pharmacy, Austin, Tex.
28–Dec. 2 American Medical Assn. clinical meeting, Statler Hotel, Washington, D.C.

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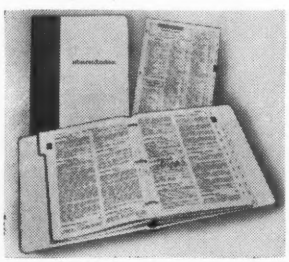

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30 Toilet Goods Assn., scientific section, Waldorf-Astoria Hotel, New York, N.Y.
30–Dec. 3 Fourth National Conference on Exchange of Persons (Institute of International Education), Jack Tar Hotel, San Francisco, Calif.

DECEMBER

2 Pan American Health Day
5–6 National Social Welfare Assembly annual meeting, New York, N.Y.
6 Mich. Academy of Pharmacy winter conference (Mich. Branch, APhA), McGregor Center, Detroit, Mich.
6–7 National Social Welfare Assembly, National Committee on the Aging, annual meeting, New York, N.Y.
12–14 Pharmaceutical Manufacturers' Assn., eastern regional meeting, Waldorf-Astoria Hotel, New York, N.Y.
15 National Pharmaceutical Council annual luncheon, Hotel Pierre, New York, N.Y.
16 National Drug Trade Conference, Gramercy Park Hotel, New York, N.Y.
26–31 American Assn. for Advancement of Science, Commodore and Biltmore Hotels, New York, N.Y.

1961

JANUARY

1–31 United Cerebral Palsy Month
2–31 March of Dimes (National Foundation)
9–12 White House Conference on Aging, Washington, D.C.
10–11 American Council on Pharmaceutical Education meeting, Palmer House, Chicago, Ill.

FEBRUARY

1–28 American Heart Month
1–28 National Sickroom Needs Month (NARD)
5–11 National Children's Dental Health Week (ADA)
8–10 Pharmaceutical Manufacturers' Assn., law section, Boca Raton Club, Boca Raton, Fla.
12–14 District No. 4, NABP-AACP meeting, Purdue Univ. College of Pharmacy, West Lafayette, Ind.
13–15 Pharmaceutical Manufacturers' Assn., central regional meeting, Edgewater Beach Hotel, Chicago, Ill.
20–21 Pharmaceutical Manufacturers' Assn., western regional meeting, Ambassador Hotel, Los Angeles, Calif.
24–25 Texas Hospital Pharmacy Seminar, Univ. of Texas College of Pharmacy, Austin, Tex.

MARCH

1–31 Red Cross Month
2–Apr. 2 Easter Seal Appeal
2 Drug, Chemical & Allied Trades Assn. annual dinner, Waldorf-Astoria, New York, N.Y.
2–3 Federal Wholesale Druggists' Assn. Mid-year Meeting, Statler-Hilton Hotel, New York, N.Y.
4–9 Druggists' Service Co. convention, Waldorf-Astoria Hotel, New York, N.Y.
8–10 Pharmaceutical Manufacturers' Assn., medical section, Ponte Vedra Club, Ponte Vedra, Fla.
12–18 Pharmaceutical Wholesalers Assn. convention, Las Vegas, Nev.
13–16 National Health Forum and annual meeting, National Health Council, Waldorf-Astoria, New York, N.Y.
15–18 Pharmaceutical Wholesalers Assn. convention, Las Vegas, Nev.
21–30 American Chemical Society national meeting, St. Louis, Mo.

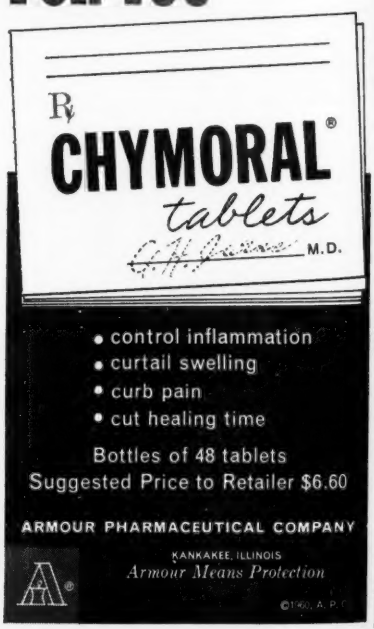
APRIL

10–14 National League for Nursing biennial convention, Cleveland, Ohio
16–19 California Pharmaceutical Assn. annual convention and trade show, Ambassador Hotel, Los Angeles, Calif.
23–28 American Pharmaceutical Assn. annual meeting, Hotel Sherman, Chicago, Ill.
27–28 Eastern States Health Education Conference, New York Academy of Medicine, New York, N.Y.
30–May 3 Pharmaceutical Manufacturers' Assn. annual meeting, The Greenbrier, White Sulphur Springs, W.Va.
30–May 6 Mental Health Week

MAY

1 Child Health Day
4–7 National Industrial Pharmaceutical Research annual conference, King's Gateway, Land O' Lakes, Wis.
7–13 National Hospital Week
8–10 American National Red Cross annual convention, Cincinnati, Ohio
9–11 Toilet Goods Assn. convention, Waldorf-Astoria, New York, N.Y.
10–13 National Science Fair-International, Kansas City, Mo.
11 Tenth Annual Pharmaceutical Conference, Rutgers Univ. College of Pharmacy, Newark, N.J.
14–17 Proprietary Assn. annual meeting, The Greenbrier, White Sulphur Springs, W.Va.
14–19 National Conference on Social Welfare annual forum, Minneapolis-St. Paul, Minn.
15–22 Foot Health Week

NEW PRESCRIPTIONS FOR YOU



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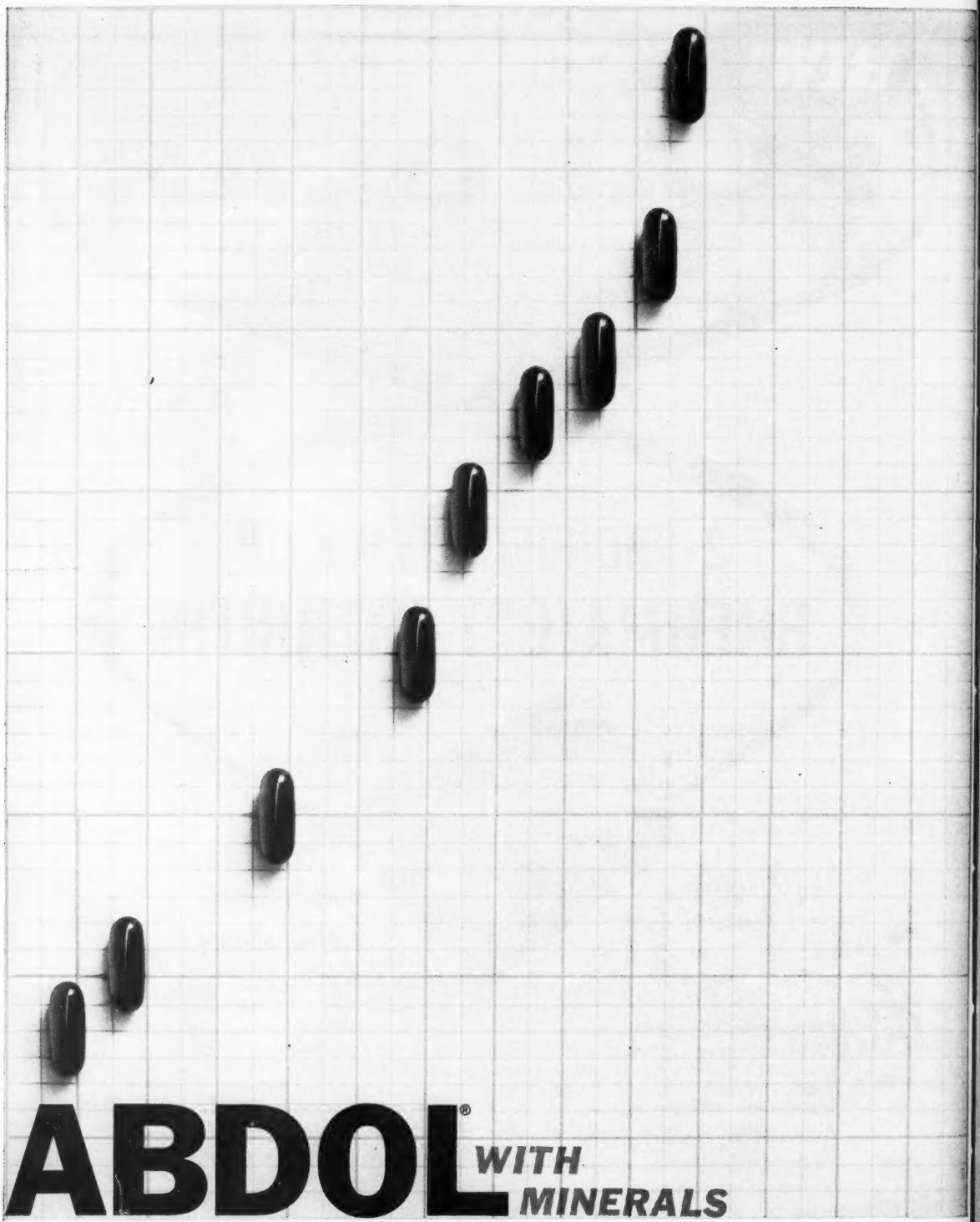

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Washington Views

FDA report card—The special advisory committee to review the policies and procedures of the Food and Drug Administration's antibiotics division and new drug branch has released its findings and recommendations. The committee, appointed in June 1960 at the request of HEW Secretary Flemming, "found no evidence of disregard for the public health and noted that appropriate action had been taken when hazards were established by subsequent experience." The committee found the decisions it reviewed acceptable, despite certain deficiencies in the quality and quantity of the data upon which they were based. To correct these defects, the committee recommended—

* proof of the efficacy as well as safety of all new drugs. Flemming concurred noting that Commissioner Larrick asked for such authority before the Kefauver hearings on June 3.

* submission of continuing reports of clinical experience, even after the drug is released for sale. Flemming concurred noting that S3815 specifically would provide for such reporting.

* applications of certification procedures for all antimicrobial agents. Flemming concurred noting that the present law only provides for certification of certain antibiotics.

* strengthening of existing factory inspection authority. Flemming concurred noting that S3815 would provide for such controls.

* co-ordinating the supervision of labeling, promotional material and advertising of drugs. Flemming agreed asking for "a careful study of the organizational problems involved."

* establishment of an advisory organization of scientific and technical experts on procedures and policies. Flemming concurred.

* funds to support these activities. Flemming concurred anticipating "recognition of this fact."

other FDA actions—

* three-month extension of time for filing views and comments on the proposal to amend labeling requirements (see APhA for "official brochure" proposal in October issue of This Journal).

* the first of new regulations under the color additives amendment (published in Federal Register for October 12).

* warning to pharmacists across the country to be alert for counterfeit drugs (see story in August issue of This Journal on counterfeit drugs and APhA's similar warnings).

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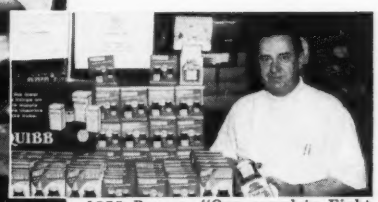
(*Continued on page 692*)

Fight Back program builds vitamin sales... wins new customers, keeps old ones

Report from Hanks Drugs
Salinas, California



1958 Report: "Our complete Fight Back program keeps vitamin sales where they belong—in the drugstore!"

The Proof of the Program is in the Profits

"We're building new vitamin sales by attracting new customers, and we're getting repeat sales by keeping our vitamin customers coming back.

"In a nutshell, that's what the Squibb Fight Back program has done for us in the last three years.

"In 1959 we had a substantial sales increase over 1958—at a time when competition from the doorstep vitamin peddler, the mail order 'vitamin diagnostician' and the off-brand dealer was tougher than ever.

"In terms of store reputation and prestige, we've clearly established ourselves as 'Vitamin Headquarters.' All our sales people have taken the Squibb vitamin instruction course so they can supply facts about vitamins. We use newspaper ads regularly...mail out Squibb's excellent vitamin leaflets with our monthly statements...and rely heavily on window and counter displays to build point-of-purchase customer interest.

"For us at Hanks Drugs, 1959 was a good vitamin year, and from all indications 1960 will see even bigger vitamin sales gains."

George A. Sargenti

SQUIBB *Squibb Quality—*
The Priceless Ingredient

A bronze plaque was unveiled in dedication of the Pfizer Medical Research Laboratories by Dr. Irvine H. Page under the watchful eyes of (left to right) Jasper H. Kane, John E. McKeen, Gov. Abraham Ribicoff and Dr. Ernest M. Weber, executive director of research and development for Pfizer.

research on the move

New research laboratories made headlines recently as Charles Pfizer and Company in Groton, Connecticut and Irwin, Neisler and Company in Decatur, Illinois held dedication ceremonies for their new facilities.

More than 1,200 physicians, research scientists, educators, government officials, drug industry executives and members of the trade and lay press toured the new Pfizer medical research laboratories on October 6, lunched under the big tent spread on the grounds of the modern, well-designed laboratory and watched Dr. Irvine H. Page, director of research at the Cleveland Clinic Foundation, unveil a bronze plaque dedicating the new laboratories.

Speaking at the ceremonies Dr. Page stressed the need to open up new fields of medical research and warned against short-sightedness and scientific prejudice which he said had handicapped advances in the early years.

Governor Abraham I. Ribicoff paid special tribute to scientists, researchers and medical workers comparing them to the great explorers of the 16th century and the men who are about to be explorers in space. He cited the increased life span of man from 47 to 70 years since 1900 and credited this 23-year increase to the work of researchers.

A welcoming note was sounded by Jasper Kane, Pfizer vice president, and a definition of medical research as a duty and privilege was outlined by John E. McKeen, president and chairman of the Pfizer board. Pointing out that research is the "key that unlocks doors to discovery," President McKeen predicted the age of the 100-year man and stressed that responsibility of industry to initiate, implement and sustain research that will bring this longer lifespan into being.

The evening before the day-long dedication ceremonies Pfizer sponsored a dinner for the press at which staff members answered questions.

Just a week before the Pfizer laboratory was opened, Irwin, Neisler and Company dedicated on September 27 its new medical research laboratory in Decatur, Illinois. More than 500 visitors attended the ceremonies which featured Senator Everett M. Dirksen, Robert A. O'Malley, publisher of *New Medical Materia*, and Mrs. E. T. Kirkland, chairman of Neisler's board.

Senator Dirksen in forecasting the actions of the coming Congress predicted that it will refuse to revise the medical care act, will not legislate drug prices and will spend more money on research.

Pointing out that pharmaceutical research is of "solid dollars-and-cents value to the entire nation," O'Malley cited the lowering of the death rate by 15 percent in two decades as proof.

Dr. John C. Zimmerman, president of Neisler, introduced the speakers.

At dinner that evening 200 members of the medical societies of Illinois heard Dr. Morris Fishbein, editor of *Postgraduate Medicine*, *Medical World News* and *Excerpta Medica*, prophesy that in the next generation infectious diseases would be eliminated, physical and mental handicaps would be virtually non-existent and the percentage of the population past 65 would be 20 percent and past 100 two percent.

Members (*continued*)

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Editorial

wishful thinking is not enough

A series of events in Oklahoma are challenging pharmacy's status as a profession. The Supreme Court of Oklahoma recently issued a mandamus directing the Oklahoma Board of Pharmacy to conduct an examination for 107 applicants lacking the professional education, training and skill required generally of licentiate applicants.

The court issued the mandamus under an 1897 law, enacted while the area was still a territory, providing for the licensing as assistant pharmacists all persons over 18 years of age having two years of practical experience in compounding and dispensing physicians' prescriptions who pass an examination as required by the state board of pharmacy. Assistant pharmacists, under Oklahoma law, can compound and dispense prescriptions the same as registered pharmacists.

APhA attempted to thwart the impending threat to public health and the profession. A telegram was sent to Oklahoma Governor J. Howard Edmundson offering the full facilities and support of APhA to protect the citizens of Oklahoma against the effects of "ignorance and incompetency." APhA wrote to each member of the Oklahoma Pharmacy Board urging him to uphold the standards of public health by giving the assistant pharmacist applicants the same examination required of any pharmacist. And APhA offered its services and support to the Oklahoma Pharmaceutical Association.

When efforts for a rehearing on the court ruling were defeated, a suit was brought to test the validity and constitutionality of the 1897 law.

While this legal maneuver was proceeding, the Oklahoma Board of Pharmacy administered an examination to 210 assistant pharmacist applicants—103 more than the court ruling required. Forty-one applicants passed the first test. Then one month later, the board of pharmacy administered a second examination for those assistant pharmacist applicants who had failed the first and also for new applicants. The board president states that 250 applicants took the second examination. Eighty-five passed the second test.

While the validity of the law under which these applicants were being examined was being challenged, the Oklahoma Board of Pharmacy rushed to examine many more applicants than the Supreme Court required. It may be that these licensed assistants will be allowed to practice even if the court subsequently invalidates the law since such a decree may not be retroactive.

Every indication is present to show that either the assistant pharmacists were not required to take the same examination as is required of registered pharmacists or that some pressures were imposed on the board members. We cannot conceive of any non-graduate applicant, except a most gifted, self-educated individual, without extensive schooling in pharmacy passing the technical examinations required to establish the competency of any individual licensed to compound and dispense prescriptions. Certainly not all the 126 applicants licensed were of this caliber. This should be of special concern to the National Association of Boards of Pharmacy and the American Association of Colleges of Pharmacy.

This undermining threat of the educational and professional standards of pharmacy was brought to the attention of the American Association of Colleges of Pharmacy at its convention in July. The members, expressing fears that they were acting on a matter beyond their scope and that action by the AACP might be out of order, passed a resolution expressing "regret of this action" of the Oklahoma Court ruling and referred the resolution to the National Association of Boards of Pharmacy for action.

Unfortunately, expressing regrets in a time of crisis is little help or consolation. The AACP, continually advocating highest standards for pharmaceutical education, is an integral part of pharmacy. It, therefore, did have jurisdiction and a responsibility to take positive action, particularly when the professional and educational standards were being by-passed.

When the AACP resolution reached the National Association of Boards of Pharmacy, the attitude prevailed that NABP could not interfere without a specific request from Oklahoma. Thus the rally died.

More decisive action was expected from NABP, too; especially with its record of resolutions directing its member boards to co-operate actively and aggressively in efforts to defeat legislation which constitutes an unjustified lowering of educational and professional standards and confronts the public with dangerous health hazards.

The basic requirements for professional status have been challenged in Oklahoma and this challenge affects all phases of pharmacy throughout the United States. When "two years of practical experience" is substituted for formal academic training and when boards of pharmacy compromise standards of competency, then pharmacy as a professional entity is threatened.

When a threat to public health and pharmacy confronts us, APhA will not hesitate to provide assistance as quickly as possible in the interests of the profession whether it be in Oklahoma, Arizona or elsewhere. In Oklahoma our voice, strength and effectiveness were diminished considerably.

We should not continually profess and resolve and then not implement this spirit with action. Our professional survival depends on actions—not wishful thinking.

a rational method of prescription pricing . . .

the professional fee concept

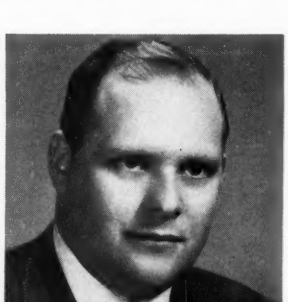
by Charles J. Hartleib, Herbert L. Flack and Robert E. Abrams*

The "fee concept" could be defined as the exclusive use of a professional fee to meet all operating expenses, including overhead and compensation, but not the actual cost of drug and container. This differs from the markup or margin concepts in which a percentage of the cost or selling price is used as the basis for covering overhead and all other expenses. However, the fee concept, in our opinion, is the more equitable method for pricing prescriptions, benefiting both patient and pharmacist.

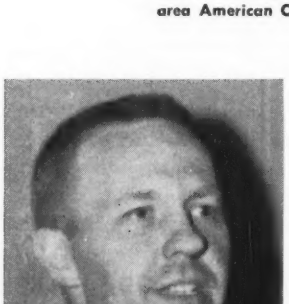
Similar opinions have been expressed by Dr. William Apple in THIS JOURNAL,[1] Professor Robert Abrams in the *Voice of the Pharmacist*[2] and Professor Horace Fuller in the *Journal of the Canadian Pharmaceutical Association*.[3,4,5,6,7]

The pharmacist is a professional person whose contribution, whether he is engaged in community or hospital practice, is service to the health needs of the community. This concept has not always been held by those outside of pharmacy and it has been only recently that constructive measures are being taken to correct this impression. One of the most important functions of the pharmacist's service is providing medication prescribed by the physician for his patients. His ability to do this is inherent to the same extent for each and every prescription dispensed. For providing this professional service, the pharmacist should receive compensation for a service, but he can only do so by adopting a uniform professional fee for each prescription dispensed. This fee is compensation for the years of study and training necessary to become qualified as a pharmacist. It is entirely independent of the cost of the medication provided. Neither the cost of dispensing and/or compounding a prescription, nor the extent and quality of the skill and knowledge, nor the degree of responsibility, either professional or legal, is a function of the cost of the medication provided. Neither is the cost of ordering, receiving, storing and otherwise handling drugs nor of overhead expenses including salaries and personal income.[8] One factor which could be considered to be a function of the cost of drugs is the capital necessary to maintain an adequate inventory of pharmaceuticals and it should be included in the overall operational cost, rather than be assigned individually to each drug or prescription.

Now enrolled in the doctor of pharmacy program at the University of Michigan college of pharmacy, Charles John Hartleib is specializing in hospital pharmacy. A graduate of the University of Toronto faculty of pharmacy, he served one-year residency in pharmacy at Jefferson Medical College Hospital in Philadelphia and prepared this article as a partial requirement for his certificate of residency. He apprenticed as a staff pharmacist at New Mount Sinai Hospital in Toronto following his graduation in 1958. His experience also includes working as an apprentice in retail practice during summers in Toronto.



Professor of pharmacy administration at the Philadelphia College of Pharmacy and Science is only one of the many posts that Robert E. Abrams, a graduate of PCPS, fills during the day. He also serves as executive secretary of the American College of Apothecaries, as editor of its newsletter and as managing editor of the *Voice of the Pharmacist*. In addition he holds active memberships in many pharmaceutical organizations and is on the board of directors of his area American Cancer Society unit.



A second generation pharmacist, Herbert Flack is assistant professor of hospital pharmacy and director of the program in hospital pharmacy administration offered by the Philadelphia College of Pharmacy and Science and the Jefferson Medical College Hospital. His career in pharmacy began when he decided to follow in his father's footsteps, even to attending the same college, PCPS. From student pharmacist at the Jefferson Medical College Hospital he became an intern in pharmacy at the New York Hospital—Cornell Medical Center. Following service in the Army he returned to his alma mater as a member of the faculty.

background of prescription pricing

The traditional method of applying a percentage markup to the cost of items of merchandise offered for sale has long been accepted in retailing almost as a matter of course. Since the multitude of other merchandise which the pharmacist provided was priced on this basis, it is easy to see how this method was carried over to the pricing of prescriptions. Thus prescriptions from the beginning were priced on the fallacy that they were to be regarded in the same category as general merchandise. Unfortunately, this idea has come to be considered well-founded by the general public, the other health professions and recently by various governmental agencies.

* Presented to the section on pharmaceutical economics at the 1960 convention of the AMERICAN PHARMACEUTICAL ASSOCIATION in Washington, D.C.

table 1-fee schedule and numerical distribution of charges by medication type

category	fee charged	distribution of charges: individual charges no.	individual charges percent	floor stock replacement charges no.	floor stock replacement charges percent	totals no.	totals percent
Injectables*						2,064	45%
Single Dose	$1.50	493	10%	874	20%	1,367	30
Multiple Dose	2.00	131	3	—	—	697	15
Floor Stock, per day	1.00	—	—	566	12		
From Bulk Container						1,635	36
Tablets and Capsules	1.50	997	22	562	12	1,559	34
Liquids	1.50	76	2	0	0	76	2
In Original Container						876	19
Single Use	1.00	89	2	546	12	635	14
Multiple Use	1.50	204	4	37	1	241	5
Totals		1,990	43	2,585	57	4,575	100

* Does not include IV fluids

table 2-comparison of revenue and gross margin by various methods of pricing

method	revenue from charges: total	revenue from charges: average	gross margin: total	gross margin: average
Markup based on list cost*	$11,164.35	$2.44	$7,552.55	$1.65
Markup based on actual cost	9,394.18	2.05	5,782.38	1.26
Fee plus list cost	10,991.10	2.40	7,379.30	1.61
Fee plus actual cost	9,939.30	2.17	6,327.50	1.38

* Present method

Note: The list cost of medication totaled $4,663.62 (average: $1.02), while the actual medication cost totaled $3,611.80 (average: $0.79)

A prescription is *defined* as an order for a specific medication for a certain patient at a particular time to be prepared by a licensed pharmacist upon the direction of a licensed medical practitioner.[9] Thus it is quite obvious that a prescription is more than an item of commerce.

At the present time there is a multitude of schedules and methods available for pricing prescriptions, both formal and informal. Nearly every one of these is based on the principle of applying a percentage markup, either entirely or in part, to the cost of the medication to determine the charge to the patient. If the cost of dispensing a prescription is calculated by applying the method used to determine the break-even point and this cost is compared with the charges made for prescriptions under present pricing methods, it will be obvious that certain prescriptions are being dispensed at a loss.[8]

Further examination reveals that the medication dispensed for these prescriptions is relatively inexpensive, but for those prescriptions from which a much greater revenue is being derived, the cost of the drugs is relatively high. The loss incurred on some prescriptions is being subsidized by the excess revenue obtained from other prescriptions.

In itself this may not be considered particularly undesirable—if the consequences are overlooked. What does happen? The physician prescribes an expensive medication; the patient pays an even higher price because a percentage markup is employed; this higher price in turn subsidizes the losses incurred on other prescriptions for which the pharmacist failed to charge an adequate price. Some schedules, the Geiger Counter for example, have tried to minimize this loss by providing a minimum charge or increasing the markup as the cost of medication decreases. The prices for expensive medication, however, have remained as high.

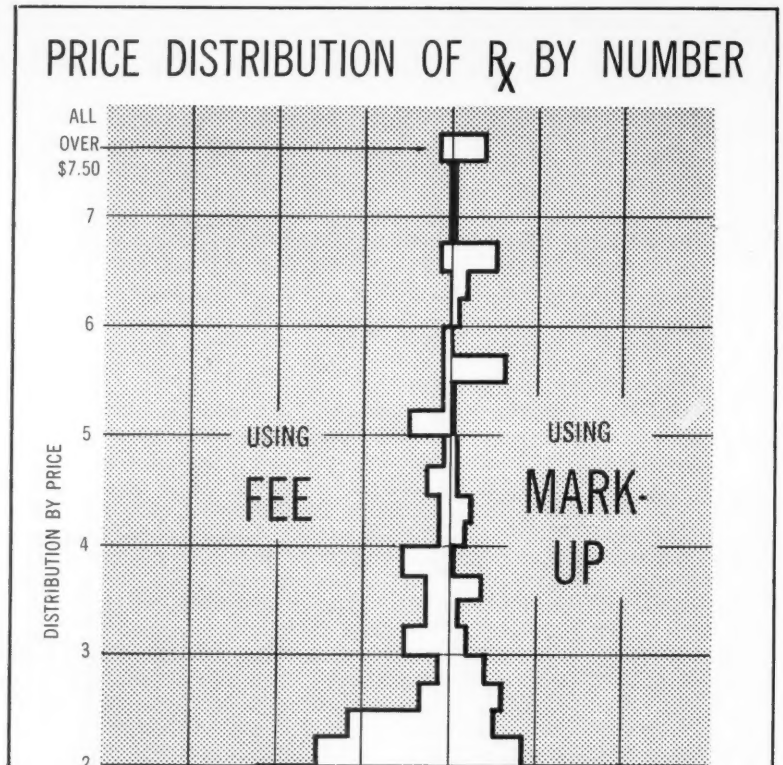
table 3-effect of medication cost change on average gross margin per prescription

	gross margin per prescription: cost of medication	income fee	income markup
Listed Cost	1.02	1.38	1.42
Actual Cost	0.79	1.38	1.26
Change	0.23*	—	0.16

* This 23 cents has been deducted from the gross margin obtained from using list cost since it is the savings accruing from quantity purchases

The use of a fee, together with the complete elimination of any form of markup or price based on the cost of the medication dispensed, would remove this subsidization entirely. At the same time, the pharmacist would receive the same income for any given number of prescriptions dispensed, regardless of the cost of the medication involved. Needless to say he does not today. If the cost of all drugs were to be reduced substantially, he would be faced with a sizable loss of prescription revenue under his present methods of pricing utilizing a percentage markup.

At Jefferson Medical College Hospital, questions were raised by some members



GRAPH 1

of the medical staff and others regarding the high cost of drugs. A study of the drugs in question revealed that this criticism was not surprising. The Geiger Counter was used as the basis for pricing resulting in a large gross margin on expensive drugs and a small margin on inexpensive drugs. This despite the fact the Geiger Counter attempts to prevent excesses by running from 40 percent margin on expensive drugs to a 65 percent margin on inexpensive drugs. For example, the margin received on one prescription may be five dollars or more while that from another may be only one dollar or less. This situation is difficult to justify as being fair to the patient. It is one of the reasons why criticism is being directed at prescription prices.

comparison with fee basis

To compare present revenue with proposed revenue through use of a fee, all prescriptions at Jefferson Medical College Hospital were surveyed for a period of one week in January 1960. Since monthly records are maintained for medication which is charged and issued by floor stock replacement, totals for the one-week period were calculated proportionately from the figures for that month. For each order dispensed three records were maintained—first was the actual cost of medication, second the cost calculated on the basis of the smallest unit size obtainable (hereafter referred to as the "list cost") and third the present charge to the patient, obtained from the Geiger Counter which uses a percentage markup based on the list cost.

From these figures, patient charges were calculated—present schedule (Geiger Counter) based on list cost, Geiger Counter based on actual cost, fee plus actual cost and fee plus list cost.

Medication orders were classified according to the categories shown in Table 1. The fee schedule used was selected rather arbitrarily—first to attempt to produce a revenue of comparable value to that now obtained and second to include some costs not actually part of the drug itself, for example, the cost of syringes for injectable medication. Table 1 also indicates the number and proportion of prescriptions dispensed in each type of medication category.

Table 2 shows that revenue is essentially the same whether a fee or a markup is utilized when the same cost basis is used. The figures in relation to the two types of medication costs are interpreted in Table 3. Included in the gross margin figures from charges based on list cost is the 23¢ average difference between the list cost and the actual cost. If this amount is deducted from the average gross margin, a true picture of the effect of a change in the cost of the medication on income is obtained.

While there is no change in average gross margin when using a fee, if the cost of medication were to decrease, there would be a 16¢ decrease per prescription when using a markup. On the other hand, if medication cost per prescription had increased 23¢, from 79¢ to $1.02, the patient would be charged an additional 16¢ or a total of 39¢ if a markup were used—and this for the same medication handled under the same circumstances. There is no logical reason for receiving more income if the cost of medication were to increase.

Table 1 shows that 34 percent of prescriptions were dispensed as tablets or capsules. Since this proportion is probably much higher in community practice, it is of interest to note that comparable figures for these drugs are practically identical to those presented in Tables 2 and 3 for the entire range of medications.

All charges were then sorted according to price, both as to the number of prescriptions and to the revenue obtained in each price range. Charges were classified in 25-cent intervals up to $10, 50-cent intervals up to $15 and in $2.50 intervals above that. Results were plotted graphically and are shown in Graph 1 (according to number) and 2 (according to revenue). The most striking, and probably most indefensible, figures are those showing that when a markup method of pricing is used, charges over seven dollars account for three percent of the total number of prescriptions while producing 13 percent of the total revenue. This is in comparison to the one percent of charges over seven dollars using a fee which produces a reasonable two percent of the revenue.

There is almost the same number of charges under two dollars whichever method is used. The difference lies in

the fact that by using a fee, 65 percent of these charges are over $1.50, while only 43 percent are over $1.50 using a markup. This accounts for an increase of eight percent in revenue obtained from charges under two dollars.

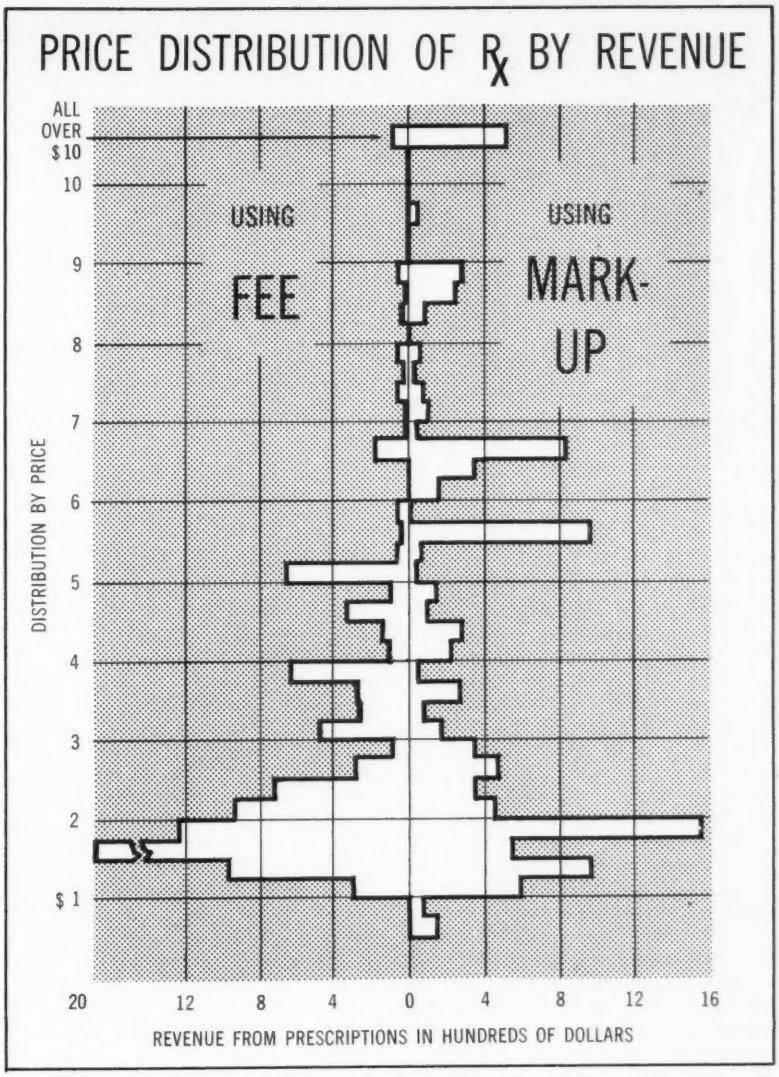
This situation is even more evident when revenue obtained from charges under five dollars is examined. The use of a fee produced 87 percent of total revenue, while use of a markup produced only 63 percent, or 23 percent less revenue. Approximately 90 percent of all charges priced by either method are under five dollars.

It is important to note that no attempt has been made to determine whether the fee schedule used in this study is either adequate or excessive. No matter what method of pricing is used, it is essential that the pharmacist know what his expenses amount to on a per prescription basis.

Professor Fuller[5] has indicated that the $1.50 fee is probably not sufficient for community pharmacies. In a nationwide survey of Canadian pharmacies, in which data on more than 42,000 prescriptions were reported, results similar to those described were obtained. A fee of $1.50 would have given 36 percent of the pharmacies reporting less revenue than by their present method of pricing. Professor Fuller concludes that two dollars would seem to be an appropriate fee. The amount of the fee would depend upon and should be determined by the circumstances peculiar to each locality and, to a lesser extent, by those of the individual pharmacy. Ideally, perhaps, the pharmacists in each local area should mutually approve a fee to be used throughout the district.

A further study of 990 prescriptions at Jefferson in June 1960 was performed which indicated that 295 charges would have been increased by using a fee, while 598 would be decreased and 97 would remain unchanged. No increase would have been more than $1.20 and only 84 would have been more than 40 cents. On 54 of the 990 charges, the gross margin obtained was $570. The use of a fee would have reduced this margin to $80 which still would have yielded approximately $1.50 over the drug cost of each prescription. These figures further illustrate the lack of any uniformity in prescription prices.

The exclusive use of a professional fee to meet all expenses incurred and derive all income desired in providing prescription service means that the pharmacist is no longer making any profit on prescription medication, but is receiving income derived from providing a professional service. He is providing medication to the patient at its actual cost to him and is charging a fee in part for this service.



GRAPH 2

conclusion

If the time should come that government agencies become involved in the reimbursement of pharmaceutical service, whether in welfare programs or in insurance schemes, they will reimburse the pharmacist at no higher level than that in effect at the time of introduction. If such programs were introduced at the present time under the present method of pricing, a high proportion of prescriptions would have to be subsidized from the sale of other items. That is, the pharmacist would be subsidizing a government program by other means than the usual one of taxation.[4]

It is essential that all prescriptions be priced on a sound economic basis. In addition to this, they must be priced by a method which includes the pharmacist's professional services as a separate distinct charge.

The best and only method to accomplish this is through the use of a professional fee as the only charge to the patient, outside of the cost of medication and container. As Dr. Apple recently stated, "Unless pharmacy adopts a pricing method which clearly delineates to the public the difference between the value of the professional service and the value of the physical commodity, the profession forfeits its best opportunity for public appreciation and recognition."[1]

The authors acknowledge the invaluable assistance and guidance received from Horace J. Fuller, professor of pharmacy administration at the University of Toronto.

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formula for success . . .

prescription pricing

cost-pricing and professional fee

by Robert V. Evanson*

Prescription pricing is one of the most important current topics discussed by everyone from executives of pharmaceutical manufacturing companies to retail pharmacists, from journal editors to college professors and students. Many ideas, facts and opinions have been expressed which find both agreement and disagreement depending upon the writer's position. But there are certain factors of prime importance to be considered which lead to a rational approach to the pricing of all prescriptions.

One basic concept to establish is the nature of the consumer's personal demand for prescription merchandise. Many writers relegate professional pharmaceutical services and the resulting products to the category of "something that nobody wants." Granted that some surveys show that not all prescriptions written reach the pharmacy, but to say that prescriptions are something unwanted is both a misstatement of fact and presumptuous. No rational person "wants" to be ill, but a person so incapacitated has both the want and the need to be restored to his normal condition of health. He may choose one of three actions—he may do nothing and permit the illness to run its course; he may resort to self-medication; he may demand the services of a physician.

Since prescriptions result from the latter action, it can be assumed that the patient choosing this action does both need and want the drugs prescribed for his particular condition.

nature of demand prices

Important to the proper understanding of demand prices—prices which consumers will pay for given quantities of prescribed drugs—is a philosophy that prescriptions may be characterized by a somewhat absolute demand on the part of patients. However, this demand is dependent upon, or is derived from, a relatively elastic commodity—physicians' services, or the kind, quality and amount of pharmaceuticals deemed necessary by the physician to restore the patient to his normal condition of health.

Thus the practice of pharmacy is based not upon an uncalculated need or unpremeditated impulse but rather upon a calculated need which is dependent to a great degree upon the therapeutic values of available products and physicians' primary preferences. For cases wherein the patients' incomes are a real, limiting factor, the prices of the primary preferences and the availability of suitable, less-expensive substitutes may be considered.

Caplow and Raymond[1] reported a study of 182 physicians in six midwest states relative to the reasons for the adoption of a drug. They found that for 377 drug histories, 85.6 percent were adopted and used by physicians because of superior therapeutic and/or administrative qualities, but that only 2.4 percent were adopted and used because of price. Evidently price *per se* is of little importance as a prime factor of the prescribing function and the patient must be willing either to pay the price quoted (presumed to be the effective demand price) or be denied the values of specificity inherent in the drug of choice.

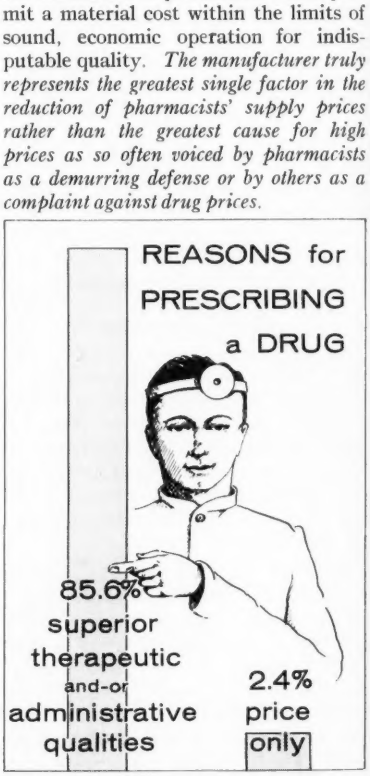
Current reactions to prices of prescription specialities seem to indicate a certain amount of resistance in demand prices. Some relief may be possible through prescribing lesser quantities, but the extent to which this action can alleviate an actual or anticipated resistance is limited by the minimum quantities required to effect a cure or maintain a desired or continuing therapeutic effect.

nature of supply prices

Supply prices are the prices which dealers are willing to accept for different amounts of output. Normally the expenses of production, when any given amount of goods or services are produced, are the supply prices of the corresponding factors of production. The sum of these are the supply prices for that amount of the commodity or service.

What are these factors of production for the pharmacy? They include the complete cost of putting the materials on the shelf, plus the complete cost of compounding or dispensing, plus the overhead costs incurred in operating the department, plus an addition for a fair return in a net or professional profit.

It is necessary to establish a basic philosophy regarding manufacturers' specialities. Although the individual pharmacist may be capable of compounding any specialty item he dispenses (given proper equipment and materials), to do so would increase production costs for like grade and quality to such levels that the prices for which he could offer prescriptions would find no buyers. Thus the manufacturer represents a form of economic substitution for the factors of production which permit a material cost within the limits of sound, economic operation for indisputable quality. *The manufacturer truly represents the greatest single factor in the reduction of pharmacists' supply prices rather than the greatest cause for high prices as so often voiced by pharmacists as a demurring defense or by others as a complaint against drug prices.*



Compounding and dispensing are also production functions. The difference in man-hours to produce finished prescriptions for specialities may be negligible but a compounded prescription requires individual attention and more than the average time. Supply prices may include an average time charge for all prescriptions with those compounded including charges in amounts equal to the additional costs for labor or each prescription may be charged as an individual event or a standard charge may be added to all prescriptions.

Overhead represents all other operative expenses including indirect labor costs related or incidental to production functions. Although it may seem

* Presented to the section on pharmaceutical economics at the 1959 convention of the AMERICAN PHARMACEUTICAL ASSOCIATION in Cincinnati.

1. Caplow, Theodore, and Raymond, John, "Factors Influencing the Selection of Pharmaceutical Products," *Jl. of Marketing*, **19**, 18 (July 1954).

plausible to fix an average charge by dividing these expenses by the number of prescriptions filled, a store filling few prescriptions would be at a great disadvantage. A standard or average cost may be determined on an efficient productive-hour basis to reflect these costs regardless of the number filled. There are many hours spent handling drug merchandise not sold on prescription; part of the advertising cost is charged to the prescription department; certain management functions have nothing to do with professional work. Thus the charges to be included in establishing the overhead assessment first must be determined and then must be reduced to some rate of assessment per unit.

The final factor of supply prices is profit. Professional profits must be determined by intelligent planning rather than obtained by hopeful accident. They must be allowed to recognize both distributive and professional services. A fixed percentage may be used to establish the net profit to be added to each prescription on the basis of total costs or break-even costs. This practice can be defended on the premise that net profit represents a return on investment. As such, the net may be allowed to reflect differentials in turnover, merchandise costs and investment in the factors of expense involved in offering the services. A fixed dollar value may be used to establish the net profit to be added to all prescriptions so long as the amount of the charge recognizes the various factors cited above. Contrary to popular opinion, the establishment of a professional fee is not the same as adding a fixed net profit to each unit.

gross margin concept

The pricing of prescriptions has followed the gross margin concept which assumes the cost of materials as a base and applies a certain percentage markup to this cost to return a gross margin based upon the selling price. The use of this method is historic and is a carryover from the accepted practice of pricing general merchandise. Neither of these facts substantiate the validity of its use in prescription pricing because the dispensing of prescriptions is not merely a distributive function.

The application of a "sliding gross margin" further indicates the undesirable nature of the method. An example of this might be: for low material costs a markup of 150 percent is applied; for medium costs a markup of 100 percent is added; for high costs a markup of 75 percent is sufficient and for very high costs a markup of 40 percent will do. Thus the pharmacist attempts to adjust his supply prices to return his supply costs at the lower level but not to return more than his supply costs at the higher levels. The fact remains that very few pharmacists know the real costs of operating their professional departments, but they recognize the unreasonable penalty at both ends of the price structure which results from applying a flat percentage rate to material costs regardless of cost level.

The use of the gross margin concept has caused a wide divergence in prices in spite of attempts to use constant or sliding margins. Pharmacies which have high ratios of compounded-to-total-prescriptions invariably realize less than reasonable profits because they are not aware of, and pay little attention to, true costs of production as a basis for pricing; pharmacies which have low ratios of compounded-to-total-prescriptions may realize more reasonable or even excess profits because the higher merchandise costs return greater margins than indicated for true costs of production.

The above reasoning can be illustrated with two stores taken from the survey of *Drug Store Operating Costs and Profits*.[2] As reported, Store No. 1 had department sales of $11,017 of which $9,074 were prescription sales and $1,943 were sales of over-the-counter (O-T-C) drug products. The net profit of $1,021 may be attributed to prescription sales because O-T-C products seemed to be sold at a loss. The compounded-to-total-prescriptions ratio was high at 41.7 percent. An application of cost-pricing technics to the published data produced a prescription net profit of $1,970 at a 25 percent markup on all costs (a 20 percent professional profit on selling price) and sales of $9,851. Thus prescription sales would be increased by 8.5 percent and net profit by 93 percent. By gross margin standards the margin would be increased from 59 percent to 62.2 percent. The addition of a minimum fee of $1 per prescription instead of the 25 percent markup would produce $13,811 sales and $5,930 net profit. Gross margin would be 73 percent and net profit to 43 percent of sales.

Store No. 2 had department sales of $99,744 of which $60,838 were prescription sales and $38,906 were O-T-C drug sales. Net profit amounted to $19,890 of which some $5,320 may be attributed to O-T-C sales, leaving prescription net profit at approximately $14,570. The compounded-to-total-prescriptions ratio was low at 7.5 percent. An application of cost-pricing technics produced a prescription net profit $11,556 at a 25 percent markup on all costs and sales of $57,780. Thus sales would be decreased by 5 percent and net profit by 20.6 percent. By gross margin standards the margin would be decreased from 51.8 percent to 49.2 percent. The addition of a minimum fee of $1 per prescription would produce $68,059 sales and $21,835 net profit. Gross margin would amount to 57 percent and net profit to 32 percent of sales.

During his career as an educator, Dr. Robert V. Evanson has focused his attention on the economic and academic aspects of pharmacy. Secretary of the APhA section on pharmaceutical economics, Evanson is also active in the Conference of Teachers of Pharmacy Administration and a member of the committee on problems and plans of the AACP. He is associate professor of pharmacy adminis tration at his alma mater, Purdue University, where he received his PhD

The important fact is—as a pharmacy's ratio of compounded-to-total-prescriptions decreases, its prices and profits tend to become more in line with sound, economic pricing practices. The reason lies in the area of costs. Whereas the pharmacist may not include all of his costs incurred in the production of a compounded prescription, he must include these costs for specialty products because manufacturers' prices for the latter are determined primarily on the basis of costs. This may explain the results published for another store for which the average price for dispensed prescriptions was $2.86 and for compounded prescriptions was 78 cents. Cost analysis indicated a cost of 91 cents to fill the latter, exclusive of any material costs.

retail pharmacy market

The *American Druggist* (March 23, 1959) reported 1958 prescription sales at $1.8 billion for 584 million prescriptions of which 323 million were new and 261 million were refills. If all pharmacies had reduced their prices by 10 percent, an increase in the demand for their professional services and restricted drugs would not have followed automatically, but a reduction of $179 million in revenue would have occurred. A similar 10 percent reduction by an individual pharmacy likewise would have reduced total revenue and would have reduced the store's volume unless it could have increased its prescription sales by more than 10 percent at its competitors' expense.

2. Burley, O.E., Fisher, A.B., Jr., Cox, R.G., "Drug Store Operating Costs and Profits," McGraw-Hill, New York (1956).

A given pharmacy may expect to lose some sales to its competitors if it raises prices above the current prices. It may expect to gain sales from competitors—although it has no assurance that it will—if it lowers prices. In other words, the demand for the individual pharmacy will be more elastic at prices above and below current prices than for the market as a whole. Under ordinary circumstances retail pharmacy exists in a system described as monopolistic competition in which each pharmacy may be said to enjoy a limited monopoly by virtue of its location, delivery services, professional reputation, credit or other differentiating factors. However, the extent to which such a monopoly can exist depends upon the number and kind of outlets existing in any given market at any given time.

A single pharmacy serving a small town has little concern about competition so long as its prices are no greater than those of its nearest distant competitor plus transportation costs to reach that competitor and adequate medical service is available locally. A few stores serving a market will of necessity each recognize a mutual dependence and the uncertain—but potential—immediacy of retaliation to price changes. In such a situation prices may tend to such uniformity as to suggest or imply some form of agreement where no agreement exists.

Where a large number of stores permit the individual unit to ignore its effect upon the action of its competitors, there still exists a limited monopoly on the part of each individual unit for reasons stated above. The retail pharmacy market as a whole includes many examples of each situation described. Therefore an analysis of some of the aspects of demand, productivity and price changes may point toward a better understanding of the problems which must be considered prior to changing a pharmacy's pricing policies or practices.

As productivity increases unit costs decrease so long as the factors of supply remain unchanged. A pharmacy which fills five prescriptions daily would price itself out of its local market if all departmental costs for the day were prorated to the five units. If 30 units were dispensed, unit costs would decrease. Sixty units per day may necessitate hiring another pharmacist—and such a move might raise unit costs to a level of diminishing returns until volume has increased enough to reduce the cost ratio to an amount profitable for the revised factors of supply. Over a short period of growth there may be some loss of profit at existing prices, but in the long run the increase in unit volume should offset previous losses. Thus there is no reason to juggle prescription prices upward for every addition to supply costs when the addition is necessitated by an expanding demand. Indeed, such an increase in prices may stifle the growth needed to pay for the additional expense. The pressure to resist increases will be greater when other pharmacies are serving the same general area and exert a major effect upon competition so as to cause an immediate shift in patronage.

In an expanding prescription business there will be the expected decrease in unit costs as productivity increases for a given set of supply factors. A natural tendency on the part of management may be to pass on to the consumer any savings in the form of price reductions, or to use price reductions as a competitive weapon to attract more professional business. However, such action is not likely to increase the demand for prescriptions, but it may lower the pharmacy's revenue and net profit. Rather than juggle prices downward for every increase in profits caused by reductions in productivity costs, the pharmacy might better absorb excess profits by increasing its competitive differentiation through better service or some special services which customers cannot obtain from competitors. In fact, it may be desirable to invest the extra profits in pharmacists' salaries as an incentive toward greater productivity. In this example, the pressure to resist decreases in prices will be greater when other pharmacies serving the same market are able to reduce prices such that little or no change in competitive advantage is likely to occur to increase unit volume or total sales.

Because prescription demand is not primarily dependent upon price, there is in the drug business as a whole a propensity to have retail prices established by manufacturers in order to promote "uniformity" of prices among all outlets and to base retail competition on nonprice values inherent in the phrase "professional service." Such a practice tends to ignore individual differences in supply prices and adheres to the use of some arbitrary gross margin—supposedly traditional in pharmacy—rather than the costs of the services: therefore, its use relative to the professional practice of pharmacy is questionable. Although a manufacturer is entitled to establish prices for the supply factors for any product he produces, he is in no position to establish prices for the professional services rendered by each of the 53,000 pharmacies in the United States. It is possible that a 33 percent or 40 percent margin on a dollar item may cause it to be sold at a loss and the same margins

(*Continued on page 730*)

dental prescriptions

Dental prescription writing is increasing, according to the 1959 *Survey of Dentist Opinion*, just published by the American Dental Association. Dentists in private practice excluding federal practitioners wrote an estimated 11,000,000 prescriptions for drugs during 1958, the ADA survey points out.

The number of dentists in private practice who are prescribing for their patients is also increasing, the survey shows. In a six-month period, 89 percent of the active private practitioners of dentistry wrote one or more prescriptions as compared with 85.4 percent during the comparable period of 1956.

During the half-year period before the survey, this group of prescribing dentists wrote an average of 83.8 prescriptions which is an increase of 7.7 prescriptions over the 1956 survey. Dentists in the age group of the 40's wrote the greatest number of prescriptions.

Prescription writing also varied according to region and city population. The dentists in the southeast and southwest wrote about twice as many prescriptions as did those in the central and New England areas. Prescription writing was least common with dentists in areas of 1,000 population and reached a peak volume in cities of from 5,000 to 25,000 population.

Antibiotics were used for dental patients by 86.6 percent of the dentists. A greater percentage of the younger dentists prescribed antibiotics in their practice than did the older age groups. Of the dentists 29 years old and under, 93.6 percent indicated in the survey that they prescribed antibiotics. The percentage declined steadily with age groupings to a low of 65.3 percent for the 65 and older age group.

Penicillin products were used more frequently in dental practice than any other type of antibiotic, the ADA survey revealed. The tetracyclines ranked second followed by erythromycin.

Dentists stated that their main source of information on types and brands of dental drugs was *Accepted Dental Remedies*, published annually by the ADA Council on Dental Therapeutics, except in the southwest where "detail men" ranked first. Overall, "literature from drug companies" ranked second and "detail men" third.

Pharmacists were listed as the main source of information on dental drugs by only 1.7 percent of dentists. However in the 29 years old and under age group, 2.8 percent indicated the pharmacist as the main source.

prescription surveys . . .

a survey of surveys*

At the organizing meeting of the AMERICAN PHARMACEUTICAL ASSOCIATION in 1852, members of the ASSOCIATION were asked to supply answers to such questions as—

How many apothecaries and druggists are there in each of the principal cities and towns of the United States?

How far is the business of dispensing medicines separated from the office of prescribing?

The report of the "survey" at the 1853 meeting brought forth a variety of statistics, including some data on dollar volume of medicines sold (as in the case of the New England states and Tennessee), the annual average total sales per pharmacy (as in Philadelphia where they were said to "range from $1,500 to $2,500"), and some trends in the price of prescriptions (as in Philadelphia where they were said to have "diminished from 25 to 50 percent within ten years' past").[1]

However, the earliest real prescription surveys were concerned with ingredient studies. In reply to a query of the Illinois Pharmaceutical Association in 1885 — "*What drugs and preparations are prescribed by physicians in Illinois?*"—Albert E. Ebert carried out a survey of 15,000 prescriptions from nine pharmacies in Illinois which provided what the *Western Druggist* called "an incontrovertible index of pharmacy."[2]

Numerous additional prescription ingredient surveys were carried out, including the Hallberg Survey of 1895,[3] the Miller Survey of 1901–1905,[4] and the Hallberg-Snow Survey of 1909.[5] However, all these studies were limited to a survey of drugs prescribed.

Among the earliest surveys concerning the economic aspects of the prescription department and prescription pricing resulted from a query posed by the Colorado Pharmaceutical Association in 1915—"*Have you ever taken the time to calculate the average cost of prescriptions and the average price received?*"

To answer this query, F. W. Nitardy conducted a survey of 1,000 prescriptions, each from ten different pharmacies in Colorado to arrive at an average price of 50½ cents.[6] In addition to being among the first to survey the economics of prescription practice, Nitardy also was one of the first to propose the use of "a professional fee" in prescription pricing.[7]

According to Paul C. Olsen, the first survey concerning compilations of margins, costs and profits of retail pharmacies was conducted by the Harvard University Bureau of Business Research in 1919. In the 291 retail pharmacies included in this survey, the prescription volume was estimated at 10 percent of total sales.

During the 1920's, regional surveys of retail pharmacies were compiled and published in five different sections of the country. These included the Northwest Pharmaceutical Bureau which, in 1924, surveyed retail pharmacies in Minnesota, Iowa and the Dakotas, most of which were located in communities under 5,000 population. In 1925, the Bureau of Business and Governmental Research in co-operation with the Colorado Pharmaceutical Association, conducted and published a survey, while in 1926, the Philadelphia Wholesale Drug Company, a retailer-owned group, surveyed retail pharmacies in that metropolitan area. Fourth among these regional surveys was one conducted by I.L. Lyons and Company, wholesale druggists of New Orleans, who surveyed retail pharmacies in Louisiana, Mississippi and Florida in 1927, and fifth in line was the 1928 survey conducted by the Cinchona Club of St. Louis, an organization of retail pharmacy owners.

All of these were local or regional in coverage and executed on a one-time basis. Furthermore, they were concerned exclusively with margins, costs and profits, without specific regard for information about the prescription department.[8]

A series of papers published in THIS JOURNAL in 1930 and 1931 emphasized the need for a national prescription survey. In 1930, Professors Leon Monell (Buffalo) and Clarence Brown (Ohio State) reported on a series of surveys made in Buffalo (1927), New York State (1929–30) and Baltimore (1930), as well as results of a new (1930) Buffalo and Columbus, Ohio survey, to establish average prescription volume in number and dollar sales, and average number of prescriptions filled per person per year.[9] The authors observed that great discrepancies exist in such totals and averages with those of other studies, and that "it is therefore apparent that a more extensive study of this subject is necessary and should be undertaken."

In May 1931, the U.S. Department of Commerce undertook a "national drug-store survey" in which the prescription department survey was limited to "13 retail drug stores in St. Louis." The results, published in 1932 by the Commerce Department,[10] noted that "the prescription department occupies an important position in the total sales volume of the 11 independent retail stores studied, the regular prescriptions accounting for 10.23 percent and the liquor prescriptions 6.16 percent of the total sales volume." However, two chain stores in the total of 13 brought the over-all average down to 8.14 percent.

Also published in 1932 was the study[11] by C. Rufus Rorem and Robert P. Fischelis which set an estimate of total prescription volume in the U.S. in 1929 at $140,000,000, representing 165,000,000 prescriptions at an average charge of 85 cents per prescription. Prescription volume was estimated by the authors as nine percent of the total drug store annual sales.

The very same year an annual nationwide survey was instituted by Eli Lilly and Company. These annual reports which have been called the *Lilly Digest* are the outgrowth of a service which over those years the company has provided for any retail pharmacist who cares to use it.

Initially, the survey was limited to margins, costs and profits, but commencing in 1937, the *Lilly Digest* was expanded to include separate statistics on the prescription department, including month-to-month fluctuations of prescription volume.

In 1934, the first Nielsen Drug Index report was published, and in 1939, *Drug Topics* launched its annual prescription survey. Following in rapid succession were the surveys by *American Druggist*, Stiles Marketing Research, the American College of Apothecaries, and *Chain Store Age*. Add to these such publications as *Drug Store Operating Costs and Profits* (Burley, Fisher, and Cox, McGraw-Hill, 1956) and the numerous individual publications in pharmaceutical journals (as Jeffries and Greenberg "National Prescription Survey, 1954–1955" in THIS JOURNAL, pp. 383–392, 1956), and it can be readily seen that the practicing community pharmacist has a wealth of information at his disposal to understand pharmaceutical economics better.

For better familiarity with the current annual prescription surveys which are available, the JOURNAL staff has prepared the adjoining comparison tables covering the past decade, and has briefly described each of these individual continuing surveys.

*This report includes certain data digested from a paper entitled, "A Review of Margins, Costs and Profits of Retail Pharmacies, 1919–1959," by Paul C. Olsen, presented before the APhA section on historical pharmacy, August 16, 1960, Washington, D.C.

average prescription price

Year	U.S.A. American Druggist	U.S.A. Drug Topics	U.S.A. Lilly Digest	U.S.A. Stiles Marketing Research	Canada Canadian Pharmaceutical Association
1959	$3.14	$2.83	$3.09	$3.21	$2.98
1958	3.08	2.78	2.96	2.92	2.78
1957	2.98	2.64	2.85	2.74	2.61
1956	2.79	2.49	2.62	2.99	2.49
1955	2.68	2.33	2.46	2.56	2.26
1954	2.56	2.21	2.27	2.33	2.28
1953	2.44	2.09	2.19	2.15	2.07
1952	2.36	1.99	2.08	2.12	1.82
1951	2.25	1.89	1.90	—	1.68
1950	2.03	1.67	1.77	—	1.72

Lilly Digest

The 28th annual edition of the *Lilly Digest* records a decade of progress in retail pharmacy operations. This 64-page, two-color booklet, published by Eli Lilly and Company, summarizes the 1959 income and expense statements of 2,095 retail pharmacies in the U.S. It sums up retail pharmacy operations by total sales, by prescription volume and by geographical sections. Of special interest is a review of the prescription department operations in the 1950's (*see comparative tables*). The *Lilly Digest* is available to any interested pharmacist, gratis, on request.

Nielsen Survey

The 26th annual Nielsen *Review of Retail Drug and Proprietary Store Trends*, published by the A.C. Nielsen Company, was released on October 6, 1960. The annual study (in part 3) includes prescription gains by area, type of pharmacy and size and a geographical comparison of the number of prescriptions per family. For comparison purposes, the study (in part 5) includes long-term growth of domestic population, trends by age groups, trend of business activity by gross national product and distribution of disposable personal income. Copies are available, at no charge, from A.C. Nielsen Co., Retail Index Division, 2101 Howard Street, Chicago 45, Illinois.

Drug Topics Prescription Survey

Drug Topics features a Prescription Survey with an analysis by Paul C. Olsen. The 21st annual survey, published in the March 28, 1960 issue of *Drug Topics*, compares 1959 results with those of the previous year for independents and chains. Statistics include Rx and total sales of both independent and chain pharmacies, comparisons of independent pharmacies by sales and number of prescriptions filled, how pharmacies shared the 1959 prescription volume and a wide range of similar data, some of which are included in the ten-year compilations presented here. Beginning in 1957, the nationwide prescription survey results of *Drug Topics* have been published monthly, in addition to the annual report.

American Druggist Survey

Each year in March *American Druggist* features an annual survey of retail pharmacy operations for the preceding year. The 1959 survey, as reported in the March 21, 1960 issue of *American Druggist* includes such pertinent information as annual prescription dollar volume and number of prescriptions filled annually per store, with individual data for independents with fountain, independents without fountain and chain stores with Rx departments. In addition to the annual compilation, *American Druggist* publishes a "fortnightly prescription survey" conducted every second week throughout the year.

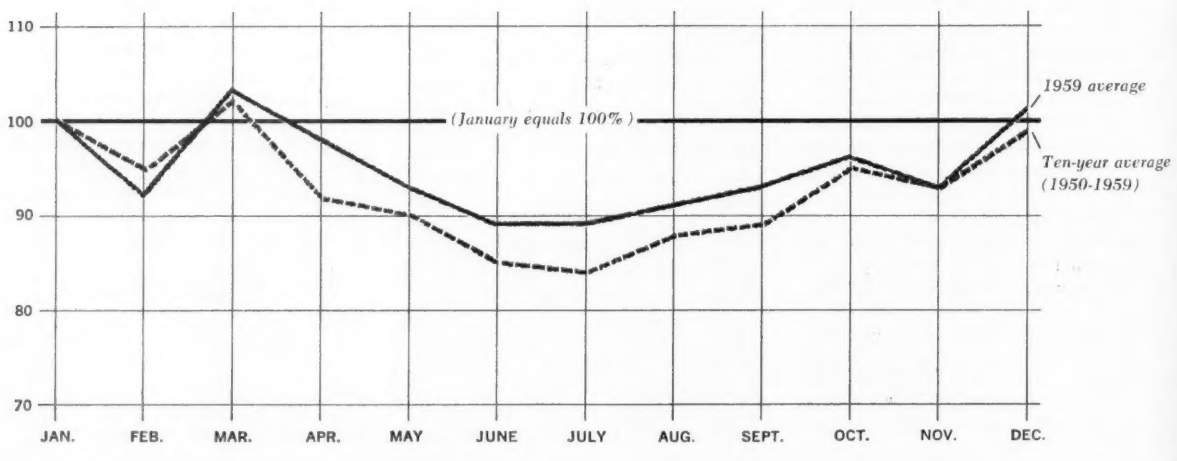
Facts on the Operation of Prescription Pharmacies

The eighth annual survey of operating costs of prescription pharmacies is published by the American College of Apothecaries. The 1959 study incorporates information compiled from 181 pharmacies, "the largest number ever included in this (ACA) study." Recorded are figures for gross profit, total expenses, net profit, inventory and such specialized information as delivery services and pharmacists' salaries and hours of employment. This 12-page booklet is available from Robert E. Abrams, executive secretary, American College of Apothecaries, Hamilton Court, Philadelphia 4, Pennsylvania.

Marketing Research Memos

David D. Stiles, director of market development for Abbott Laboratories and one of the nation's top authorities on the economics of the prescription department operation, issues an annual national prescription survey. The 1959 survey (dated July 1, 1960), consisting of three mimeographed pages, reports on a study made of 180,899 prescriptions from 23 different areas. It shows the trend toward writing prescriptions for specialities, reviews the types of medications prescribed and gives a breakdown of the average prescription prices.

Month-to-month fluctuations in prescriptions filled by Lilly Digest pharmacies



Chain Store Age Survey

The second annual prescription sales report of CSA appears in the August 1959 issue of *Chain Store Age*, Drug Executive Edition. Described as a "biennial study of the chain drug store market" (the first study was published in 1956), the CSA survey includes statistics on prescription volume (grouping prescriptions and prescription accessories). According to the report, prescription volume accounted for 14.7 percent of total chain drug store sales in 1958.

Canadian Pharmaceutical Association Survey

The 18th annual survey of CPhA was published September 1, 1960 by *The Canadian Pharmaceutical Journal* in the form of a 32-page, two-color booklet. The Canadian survey, authored by H.J. Fuller, professor of pharmacy administration, faculty of pharmacy, University of Toronto, makes an interesting contrast with U.S. surveys (*see adjoining table comparing average price of prescriptions for the past decade as an example*). The 18th annual survey summarizes the "revenues and costs of retail pharmacy operations across Canada" by provinces, by total sales volume and by prescription volume. Also included are tables showing the "effect of turnover on total income" and a geographical distribution of pharmacies reporting.

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estimated total number of prescriptions filled in the U.S.

Year	American Druggist	Drug Topics
1959	630,452,000	711,660,000
1958	584,091,000	655,110,000
1957	561,260,000	641,330,000
1956	524,205,000	585,920,000
1955	571,564,000	529,000,000
1954	444,929,000	484,300,000
1953	425,986,000	463,200,000
1952	419,447,000	452,700,000
1951	392,925,000	433,500,000
1950	367,828,000	419,700,000

average number of prescriptions per store

Year	American Druggist*	Drug Topics**	Lilly Digest**
1959	12,998	13,070	14,656
1958	12,111	12,040	13,693
1957	11,746	12,030	13,502
1956	11,103	10,930	11,985
1955	10,158	9,887	11,273
1954	9,630	9,138	11,037
1953	9,169	8,823	10,295
1952	9,719	8,689	10,436
1951	9,223	8,385	9,875
1950	8,650	8,197	9,020

* Average for independent pharmacies without fountains. American Druggist also tabulates averages for independent pharmacies with fountains and for chains.
** Average figured for pharmacies of all types.

percentage prescription sales of total sales

Year	American Druggist	Drug Topics	Lilly Digest
1959	26.9%	27.9%	34.0%
1958	26.5	27.2	32.4
1957	25.2	26.2	30.9
1956	24.8	25.0	29.5
1955	23.8	23.5	27.3
1954	25.2	21.7	24.9
1953	23.7	20.3	24.2
1952	22.9	19.4	23.7
1951	21.2	18.6	21.8
1950	19.4	17.4	20.4

percentage prescriptions refilled to total ℞ volume

Year	American College of Apothecaries	American Druggist	Lilly Digest
1959	50.8%	45.8%	48.0%
1958	45.5	44.9	47.0
1957	42.1	43.4	45.7
1956		42.6	44.5
1955		40.9	43.2
1954		41.1	42.3
1953		40.2	40.1
1952		40.0	40.6
1951		41.1	42.5
1950		41.0	42.2

pharmaceutical marketing research organizations*

by Milton Joseph Leibson

Emphasis on research and development—a prime factor in the rise of product differentiation, new compounds, new products and new therapies was initiated following World War II. Prior to that period, emphasis in the pharmaceutical industry was primarily on manufacturing technics and production of standard items.

This emphasis on research has been instrumental in the growth and present-day prosperity of the pharmaceutical industry and the improvement of our nation's health and has resulted in increasingly complicated marketing problems for the manufacturer. As a consequence of these more complicated marketing problems—and also because of the growth of marketing as a tool of management—the industry has witnessed the rise of the marketing function.

Management today has become market-oriented. It has witnessed the broad influence of the marketing concept in action. It has recognized the need and importance of market planning. To do the best market planning, the best possible information is needed about markets, that is, marketing research information.

The pharmaceutical industry is indeed fortunate to have available an armamentarium of market research services. These services are provided through the medium of trade and business publications, independent marketing research agencies, advertising agencies, governmental and nonprofit organizations. In addition to the services provided by external groups, the marketing research departments of the various manufacturers contribute to the need for specialized and confidential research.

This article** is concerned with a brief description of the prescription survey services offered by the following market agencies.

* Condensed from a Master's thesis entitled, "Pharmaceutical Marketing Research. A Survey of Pharmaceutical Manufacturers to Determine the Services Available and the Services Desired," submitted to the faculty of the graduate school, Brooklyn College of Pharmacy, Long Island University, June 1960.

** This paper is an abstract of a portion of a complete study which describes not only the marketing research services and publications available but also surveys pharmaceutical manufacturers to determine what new services might be desirable.

Market Research Associates, Inc.

Market Research Associates, Inc., 537 Post Road, Darien, Connecticut is concerned with pharmaceutical market analysis by prescriptions, advertising and promotion. Analyses and reports are submitted monthly on sales of prescription products in drug stores throughout the United States—specialties, forms and potencies prescribed. Reports are also available describing periodic prescription size, manufacturer and prices charged.

The *Associated Prescription Panel Service* provides information on the relative size and importance of all major and most minor Rx classes. The survey shows projected (total U.S.) new prescription counts by therapeutic classes, products (specialties and generic), forms and potencies. The report also carries data on average prescription sizes or quantities refill ratios, wholesale selling prices and manufacturer revenue conversion factors. The data for the Prescription Survey are obtained from a carefully selected panel of 250 pharmacies.

R.A. Gosselin Company

The R.A. Gosselin Company, 422 Beacon Street, Boston, 15, Massachusetts is a marketing research organization specializing in the pharmaceutical field. The company was one of the pioneers in the field of nationwide prescription and hospital sales auditing. The continuing services supplied at the present time are the *National Prescription Audit*, the *Weekly Prescription Audit* and the *National Hospital Survey*.

The *National Prescription Audit* is designed to provide subscribers with a comprehensive, informative and rapid market data source. Basically, it serves two important functions—(1) it measures product demand and (2) it isolates and describes many of the numerous variables constituting the demand for prescription pharmaceuticals. Two reports are issued each month. They are the *Advanced Report for Management* and the *Main National Prescription Audit*.

The *Advanced Report for Management* includes information on total prescription frequency and dollar value by therapeutic groups and new product selection showing three months' performance data for all new items appearing in audit.

The *Main Report* is to provide a detailed breakdown of the data comprising the full monthly sample.

The *Weekly Prescription Audit* is a service designed to provide a rapid week by week reading of new product acceptance and effects upon competition.

Audits are conducted by local survey agents who visit the audit pharmacies each week to conduct a survey of the prescription files for the product group being audited. Results from all audit areas are collated in the main office and a telephone report made directly to the client usually within four or five days after the close of each audit week. A written report follows.

Weekly reports may be modified to cover refilled prescriptions, doctor's use directions and over-the-counter sales.

Davee, Koehnlein and Keating

Davee, Koehnlein and Keating, 105 West Adams Street, Chicago, Illinois are marketing and distribution researchers and consultants, a professional marketing research organization offering a service covering all phases of distribution, particularly pharmaceuticals. Facilities include a nationwide field organization of about 500 interviewers supervised by 20 resident supervisors who conduct monthly continuing work for clients.

The *Pharmaceutical Market-Drug Stores* shows on a monthly basis the total dollar volume of each item, proprietary and ethical, and supplies totals in the ethical category, both the volume accounted for by new prescriptions and refill prescriptions. Products are grouped into well over 100 therapeutic classes and subclasses with trends shown, based on year to date accumulations compared to previous year. Summations show the total dollar volume and trends for each company of each therapeutic class. A *Report to Drug Industry Management* summarizes and analyzes critical developments and trends each month.

Taylor, Harkins and Lea, Inc.

Taylor, Harkins and Lea, Inc., 8600 Prospect Avenue, Philadelphia 18, Pennsylvania is concerned essentially with research in medical marketing. Among the major services offered by this organization is *The National Drug Therapeutic Index*.

The *National Drug Therapeutic Index* is a service which produces complete and nationally estimated data based on the 160,000 patients seen by a statistically random sample of 1,200 physicians in private practice.

The *National Drug Therapeutic Index* data are provided in three different forms—(1) comprehensive reports, (2) IBM cards and (3) microtapes of the actual case record form filled in by the physician. The *Index* provides the numerous other dimensions needed for today's marketing and research decisions, including the size of the market in terms of the number of different drugs presently used to treat the "indicated" diseases, the number of drug uses for presently available drugs and the number of times a particular drug action is desired by the physician.

A.C. Nielsen Company

The A.C. Nielsen Company, 500 Fifth Avenue, New York, New York reports continuously on sales of commodities and individual brands distributed through food, drug, variety and pharmaceutical stores. Statistics are obtained from store calls, through auditing invoices and inventorying merchandise on a national sample of approximately 3,000 stores.

Data are interpreted and presented to clients bimonthly and include consumer sales, retail purchases, inventories, prices, out-of-stock, distribution and dealer co-operation.

Recognizing the specialized needs of pharmaceutical manufacturers, the A.C. Nielsen Company offers a newly designed pharmaceutical index to aid the members of the industry in solving problems in distribution and marketing. The specifications and technics used in formulating this new and improved *Nielsen Pharmaceutical Index* are unique in the field of marketing research.

The *Neilsen Pharmaceutical Index* measures consumer sales by detailed, personally conducted audits of invoices and inventories in more than 800 typical high volume pharmacies—chain and independents—in the United States.

Medimetric Institute

The Medimetric Institute, 130 East 59th Street, New York, New York is a marketing research organization specializing in medical and pharmaceutical fields.

Monthly national probability surveys of 700 doctors and 800 druggists are conducted to obtain data on attitudes, opinions and practices relating to medical population and to keep close, statistically valid records of prescription writing. Results are published each month in three volumes with hundreds of tables and expert analyses of data.

The National Prescription Sales Index includes monthly and bi-monthly reports of new and refill prescriptions and percentage of each drug and its composition and sales by city size, region, size of store (number of Rx per week) and type (independent or chain).

Paul De Haen

Paul De Haen, 11 West 42nd Street, New York, New York, a consultant to the pharmaceutical industry and allied professions, is at present preparing two major surveys for presentation to the pharmaceutical industry. *New Product Survey of New Chemical Entities Introduced from 1949 to 1958* and *New Product Survey for the Years 1954 to 1958.*

The New Product Survey of New Chemical Entities, 1949–1958 offers a subscriber an immediate and comprehensive review of what new single chemical entities have been introduced, for what purpose, by whom and in what year. Used together with current market research data, they represent the key to success and failure of pharmaceutical research and point to the type of products needed in a given area.

New Product Surveys, 1954–1958 reviews significant new single chemical entities made available by the industry each year and the impact of these products on the practice of medicine.

related services

Other marketing research organizations which do not provide regular prescription surveys, but whose services are extremely useful in developing such programs, include:

Dun and Bradstreet, Inc.

Dun & Bradstreet, Inc., 99 Church Street, New York, New York is primarily a credit reporting agency but operates a substantial marketing and research service for manufacturers, trade associations, publishers and others.

Institute for Motivational Research, Inc.

The Institute for Motivational Research, Inc., Croton-on-Hudson, New York is directed by Ernest Dichter, PhD. It is consultant in motivational research for business and industry furnishing scientific answers to questions of consumer behavior and translating them into practical applications for advertising, marketing, sales and personnel.

Econometric Institute

The Econometric Institute, 230 Park Avenue, New York, New York was organized to provide forecasts required by management in budgeting current operations and making long-range plans.

Alderson Associates

Alderson Associates, 3 Penn Center Plaza, Philadelphia, Pennsylvania is a consulting organization with its own marketing research facilities. Marketing counsel is provided on all phases of international organization, sales efficiency and the evaluation of market opportunity.

Arthur D. Little, Inc.

Arthur D. Little, Inc., Cambridge 42, Massachusetts is one of the oldest

A graduate of Clarkson College of Technology and St. John's University college of pharmacy, Milton L. Liebson, marketing manager of Liberty Drug Service Company, Inc., supervises sales, marketing policies, mail-order distribution, packaging, and distribution channels. At present he is matriculated in the doctorate program leading to a PhD in pharmacy administration at Long Island University, Brooklyn College of Pharmacy, Brooklyn, New York.

industrial and engineering research firms in the United States. Activities in organic chemistry, chemical engineering, biology, physics, flavor, metallurgy, mechanical and plant engineering are carried out in marketing research and operations analyses.

Market Facts National Panels, Inc.

Market Facts National Panels, Inc., 39 South La Salle Street, Chicago, Illinois conducts market surveys for advertising agencies, manufacturers and trade associations, using controlled mail panels as a source of primary data.

Psychological Corporation

The Psychological Corporation, 304 East 45th Street, New York City, New York was organized in 1921 for the advancement of psychology and the promotion of its useful applications. One of the divisions of the company, the marketing and social research division, deals with problems in the field of advertising, marketing, selling, public opinion and public relations.

Elrick and Lavidge, Inc.

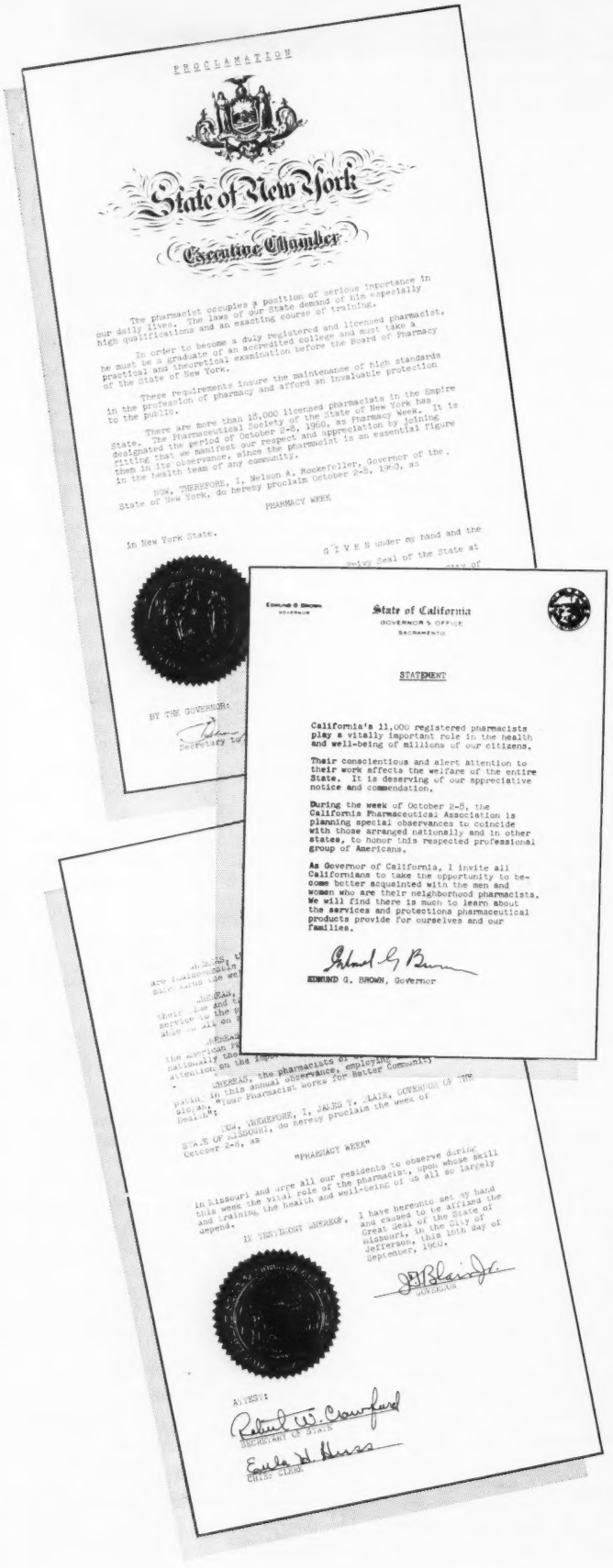
Elrick & Lavidge, Inc., Chicago, Illinois is a marketing consultant offering a complete problem-solving and nationwide fact-finding service. The firm provides confidential, factual marketing research reports, conclusions and recommendations to management.

Science Information Bureau, Inc.

The Science Information Bureau, Inc., 34 East 51st Street, New York, New York acts as an impartial consultant to important members of the pharmaceutical industry. Its chief function is gathering and interpreting data from the medical, nursing, pharmaceutical and allied professions.

in proclamation . . .

national pharmacy week



PROCLAMATION

State of New York

Executive Chamber

The Pharmacist occupies a position of serious importance in our daily lives. The laws of our State demand of him especially high qualifications and an exacting course of training.

In order to become a duly registered and licensed pharmacist, he must be a graduate of an accredited college and must take a practical and theoretical examination before the board of Pharmacy of the State of New York.

These requirements insure the maintenance of high standards in the profession of pharmacy and afford an invaluable protection to the Public.

There are more than 18,000 licensed pharmacists in the Empire State. The Pharmaceutical Society of the State of New York has designated the period of October 2-8, 1960, as Pharmacy Week. It is fitting that we manifest our respect and appreciation by joining in its observance, since the pharmacist is an essential figure in the health team of any community.

NOW, THEREFORE, I, Nelson A. Rockefeller, Governor of the State of New York, do hereby proclaim October 2-8, 1960, as

PHARMACY WEEK

In New York State.

GIVEN under my hand and the

BY THE GOVERNOR:

State of California

GOVERNOR'S OFFICE

SACRAMENTO

STATEMENT

California's 11,000 registered pharmacists play a vitally important role in the health and well-being of millions of our citizens.

Their conscientious and alert attention to their work affects the welfare of the entire State. It is deserving of our appreciative notice and commendation.

During the week of October 2-8, the California Pharmaceutical Association is planning special observances to coincide with those arranged nationally and in other states, to honor this respected professional group of Americans.

As Governor of California, I invite all Californians to take the opportunity to become better acquainted with the men and women who are their neighborhood pharmacists. We will find there is much to learn about the services and protections pharmaceutical products provide for ourselves and our families.

EDMUND G. BROWN, Governor

WHEREAS, the pharmacists

public, in this annual observance, employing

WHEREAS, "your Pharmacist works for Better

health";

NOW, THEREFORE, I, JAMES T. BLAIR, GOVERNOR OF THE

STATE OF MISSOURI, do hereby proclaim the week of

October 2-8, as

"PHARMACY WEEK"

in Missouri and urge all our residents to observe during this week the vital role of the pharmacist, upon whose skill and training the health and well-being of us all so largely depend.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Missouri, in the City of Jefferson, this 10th day of September, 1960.

GOVERNOR

ATTEST:

SECRETARY OF STATE

CHIEF CLERK

The story of the pharmacy profession—how it combines an ancient heritage with the complex technical skills of tomorrow, how it works for better community health, how it probes deep into the mysteries of the future to bring miracles to today—all this was told and retold during National Pharmacy Week, October 2–8. It was told through displays in pharmacy windows, in hospitals, in colleges and in public centers; through television and radio programs; through newspaper advertisements and stories; through personal contacts and through the service of the pharmacist himself.

A review of National Pharmacy Week will be presented in detail in the December issue of THIS JOURNAL but typical of the governors and mayors who signed proclamations declaring the first week of October dedicated to the profession of pharmacy are those on the opposite page.

1. Ohio—Harold K. Emerson, president-elect OSPhA, Gilbert J. Rea, vice president, James L. Marshall, president (standing left to right) and Governor Michael V. DiSalle (seated).

2. New Jersey—Margaret S. Maskrey, president of the State Nurses' Association, Governor Robert B. Meyner, Sara M. Errickson, executive secretary, NJSNA (seated, left to right), and Joseph W. Mittuch, president, NJPhA, and John J. Debus, secretary (standing).

3. California—Standing (left to right) Leonard Parsons, president, SCPhA, Joseph Powelson, vice president, CPhA, William G. Galbreath, president, NCPhA, and seated pharmacy assemblyman Byron Rumford and Governor Edmund G. Brown.

4. Texas—Left to right, Governor Price Daniel with George E. Holden and R.L. Brusenhan, president of TPhA.

5. Arizona—Governor Paul Fannin (seated) and Mil Dierdorf, Al Duncan, Chauncey McCary and Tony Schneider (standing, left to right).

6. New Hampshire—Left to rignt, NHPhA representatives C. Raymond Reed, and Sister J. Fisette, Governor Wesley Powell, Grace E. Hannan, secretary-manager, Charles D. Dockham, president.

7. North Dakota—Al Doerr, secretary of the NDPhA, Tony Walters, Vernon E. Wagner, John L. Jacobsen, David A. Hester (standing, left to right) and Governor John E. Davis (seated).

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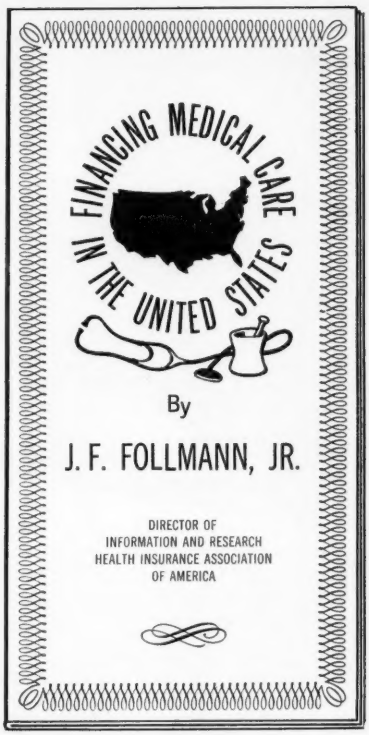
PHARMACY WEEK

in the United States . . .
financing medical care*



In 59 nations throughout the world today medical care for all, or most inhabitants, is provided by the government. Most of these provide medical benefits under a compulsory social insurance system. Many have come into being since World War II although the first government scheme became effective in Germany in 1883. Some—such as Australia, Sweden, the USSR and the United Kingdom—provide medical services under a separate governmental program covering all residents. Others—such as Belgium, Denmark and Japan—provide government subsidization for private mutual sickness funds, membership in which is usually compulsory. All European nations except Finland have some type of governmental health and maternity program.[1] All types of government structures and all forms of political and social ideologies are represented among those nations having broad government medical care programs.

It is of interest to note, however, that in Great Britain, after 12 years of the national health service, voluntary health insurance has grown to the point where it covers some 25 percent of the population. Membership in the British United Provident Association alone has increased more than ten-fold since 1949 and the growth rate has continued at a remarkably steady pace. The benefits are, in effect, supplementary and ancillary to those obtainable under the national health service.

Several reasons appear to account for this growth. Predominant, perhaps, is the need to overcome the delays, at times appreciable, in obtaining service in the government general hospital ward by providing through insurance, the means for private hospital care.

Another reason is the desire for freedom of choice in the selection of surgeons, specialists and consultants. Still another is the desire for privacy. There is not at present anything which would indicate that this growth of voluntary health insurance in Great Britain will not continue.[2]

Various methods are used for financing these government programs. In the main, funds are derived either entirely from general tax funds or from a tax on employers and employees with general tax funds furnishing the remainder. Many of these schemes have given evidence of presenting financial problems as the cost of operation increases and assumes a larger portion of the gross national product.

A career of service in the health insurance field might well capsule the life of J.F. Follmann, Jr., director of information and research of the Health Insurance Association of America. He has served as chairman of several committees concerned with health insurance—New York Advisory Board of Accident and Health Insurance Examinations, industry advisory committee to the New York joint legislative committee on health insurance plans and the cost and methods subcommittee of the dental advisory committee Office for Dependents Medical Care, Department of Defense—written books and articles and at present is serving as consultant to the American Medical Association, the American Dental Association, the President's committee on migratory labor and the U.S. Department of Labor.

* Presented at the 1960 convention of the AMERICAN PHARMACEUTICAL ASSOCIATION in Washington, D.C.

drugs under government programs

Under these government programs prescription drugs and medicines are generally included although the approach differs among nations. For example, in some countries, such as Great Britain, all prescription drugs are provided, but a charge is levied on the patient for each prescription; in others, such as New Zealand, all prescription drugs are provided, but the supply under one prescription is limited to a certain number of days; in others, such as Australia, the drugs provided are limited to those which are "life-saving" or "disease-preventing;" in others, such as Canada, the drugs provided are limited to those used in-hospital and may be further limited with respect to certain types of drugs by the provinces; in others, such as the Netherlands, the re-imbursement for drugs supplied by pharmacists is specified and controlled; and in others, such as Denmark, only a specified percentage of the cost of the prescription is paid for by the government.[3] Generally there is evidence of concern over the cost of drugs under these government programs. Such concern can only lead to increasing regulations and controls of various types.

Notably absent from the nations having enacted broad government medical care programs is the United States. The subject has been under consideration at the federal level, however, intermittently since 1927 when President Hoover appointed a committee on the costs of medical care. There then followed the appointment of an interdepartmental committee by President Roosevelt in 1935 and the convening of the National Health Conference in 1938. In 1939, Senator Wagner introduced the first bill to Congress which would have provided a broad compulsory

medical care program through federal subsidies to the states. This was followed in 1941 by a similar, though more liberal, bill by Senator Capper. In 1942 a proposal by Representative Eliot would have placed for the first time, the administration of a compulsory medical care program wholly with the federal government. The following year the first Wagner-Murray-Dingell bill was introduced. Since that time there has been a continuous flow of essentially similarly intended proposals, as well as proposals for federal subsidies of various kinds.

Meanwhile, the Ewing report to the President in 1948, the Clark report to the Senate in 1951 and the Magnuson report to the President in 1952 not only made available a fund of background material but served to influence the opinions of many. More recently the issue has centered on the provision of certain types of medical care for certain of the aged population, the first such bill having been introduced in 1952. This issue reached its height in intensity this year, with a strong effort for enactment of a social security type bill being made by organized labor and with committees of Congress being asked to consider a variety of measures.

government provisions for medical care in U.S.

To note the absence of a broad compulsory government program for medical care in the United States is not to say, however, that local, state and federal governments have not evidenced concern over the economic consequences of illness and accidents. Quite the contrary. Workmen's compensation laws in all states and nonoccupational statutory disability benefits laws in four states bear witness to this. So does the tax relief provided in state and federal income tax laws for personal medical expenses and for employer contributions to voluntary health insurance programs. So, also, do the $5.4 billion being spent annually by the various levels of government for the provision of medical care for certain persons—the needy, veterans, uniformed services personnel and their dependents, seamen, government employees, Indians and Eskimos and those in penal and corrective institutions—for the construction of hospitals and other facilities for care, for public health facilities, for medical education and for research.

There are probably many, often interrelated, reasons why a broad government medical care program has not been enacted in the United States—

▶One, unquestionably, would be the high degree of medical care in our nation and the general availability of medical care facilities.

▶Another would be the generally high standard of living and the increasing spread of our economic resources which are characteristic of the United States and which set it apart from most other nations.

▶Still another would be the important role played by our local communities, counties and states in providing medical care, particularly to the needy, coupled with our traditional reticence at delegating broad powers to a federal government.

▶Another would be the consciousness on the part of the providers of care, as well as many voluntary agencies, of the existence of a social problem and an active response to this by voluntary co-operative methods.

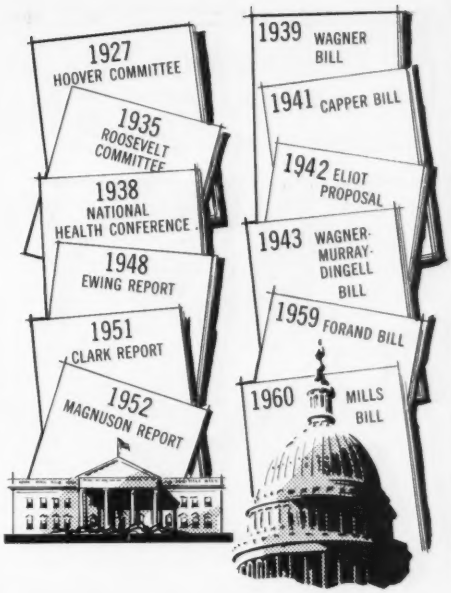
A recently completed study,[1] in discussing this subject, concludes—

But for the development of private voluntary health insurance, the United States would unquestionably long since have adopted a compulsory governmental health service.

The great expansion of voluntary health insurance in recent years is part of a significant social and economic transformation in the United States. Since 1941, in a short span of 19 years, the American people have witnessed some of the most phenomenal social and economic changes in the entire history of our country. In keeping with our democratic way of life these developments have found public favor only when they provide a service or product that was thought desirable or necessary by most of us. The financing of health care is an outstanding example of a social need which American enterprise has been striving to meet through the development of voluntary health insurance. In 1941, voluntary health insurance was comparatively unknown to the majority of American people.

forms of protection

Today protection against the costs of medical care is made available in many forms and by various types of insurers. These include insurance companies, service plans such as Blue Cross and Blue Shield, dental service corporations, group medical practice plans operating on a prepayment basis, vision care plans, plans which are self-administered by employers or labor unions, prepaid prescription drug plans, community plans, fraternal societies, and rural and consumer co-operatives. Coverage is available on an individual, family, association and group basis. The vast majority of the coverage is written on a group basis, with the employer paying all or a portion of the cost in most instances.* In terms of the number of people covered, insurance



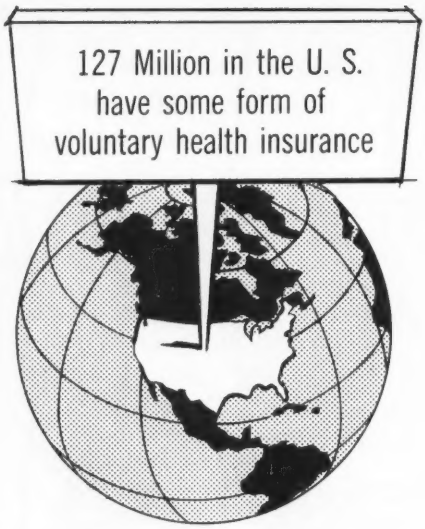
company coverages increased 140 percent (to 71,798,000 persons) in the decade 1949–1958, Blue Cross-Blue Shield and similar plan coverages increased 62 percent (to 55,205,000 persons) and other types of prepayment approaches, including prepaid group practice plans, increased 30 percent (to 4,865,000 persons).

Each type of insurer has its distinct approach, providing the buyer of insurance the opportunity to choose the kind of plan best suited to his needs. While the resulting heterogeneity can at times present an impediment to a ready simplified understanding of the subject, it is necessary to recognize that many aspects and concepts of voluntary health insurance are quite recent and must be looked upon as experimental and that this form of insurance, like medical care itself, must remain in a dynamic state of evolution. This situation is unique in our nation. In no other country at any time has there ever been such vitality, comprehensiveness, and flexibility with respect to voluntary mechanisms for the payment of medical care. Those who speculate that a broad compulsory government health service in the United States is inevitable might well take note of this remarkable development.

At the end of last year more than *127 million* people in the United States are estimated[4] to have some form of voluntary health insurance against the costs of medical care. This is 72 percent of the entire civilian population of our country. In 1941 the proportion of the population having such protection was only 12 percent. A decade ago it had grown to 45 percent.

Meanwhile, coverage has been extended appreciably to those population groups which formerly had not been

* A study of 300 collectively bargained plans reports that the entire cost is borne by the employer in 60 percent of the plans and shared in the cost of the remainder. *Health and Insurance Plans Under Collective Bargaining, Bulletin No. 1274*, U.S. Department of Labor, March 1960.



protected by voluntary health insurance in as great proportions as the population as a whole. These include the aged, those who are employed in small groups, those who live in rural areas, the self-employed and those who are dependents of insured persons.

The predominant forms of coverage purchased provide protection against the costs of in-hospital care and surgery. Protection against the cost of physicians' care in-hospital and in the office or at home are the next most widely purchased form of protection. Insurers of all types have been experimenting, however, and expanding their coverages to provide an increasing degree of protection against other forms of medical care.

expanding coverage

Today there is appreciable insurance and prepayment coverage against the costs of nursing care. Routine in-hospital nursing is generally covered by insurance companies and Blue Cross plans. Coverage for various types of nursing in the home has become increasingly available in recent years, including the service of a full-time nurse in the home and some instances the services of visiting nurses and practical nurses.[5] On the horizon are coverages for organized home care programs.

Insurance and prepayment against the costs of dental care have been increasing in recent years. Hospital confinement for dental care has generally been covered by insurance companies and Blue Cross plans, and many insurance companies cover dental surgery performed by a dentist or oral surgeon.[6]

Vision care, including all the professional services which the optometrist may render, is not generally covered under voluntary health insurance plans but some coverage is provided by Blue Shield and Blue Cross plans and, in a few instances, insurance companies have written some coverage for vision care.[7]

The costs of prescription drugs are being increasingly covered by voluntary health insurance today. Drugs prescribed in-hospital have been traditionally and generally covered by insurance company and Blue Cross coverages for in-hospital care. Out-of-hospital prescription drugs are now being covered under major medical expense insurance coverages being offered by the insurance companies, subject to the deductible and co-insurance features of the coverage. Today more than 22 million people have this form of protection, which has been the fastest growing form of insurance coverage since its inception a decade ago. Under this form of insurance all prescription drugs which are necessary to the treatment of the patient, and the cost of which is reasonable, are covered.

The fragmentary data available[3] indicate that under group major medical expense coverages, benefits paid for prescription drugs vary from four to nine percent of the total benefits paid for medical care expenses. Differences in these proportions can result from such factors as the economic level of the covered employees, age and sex of the covered persons, the nature and amount of the deductible provision and the maturity of the group insurance plan.

Weil and Caruso,[8] writing on health insurance in THIS JOURNAL said—

> **The ideal physician-pharmacist relationship is one in which the patient receives a prescription from his physician and has it filled at the pharmacy of his choice....These newer health plans leave the choice of the pharmacy entirely to the discretion of the policyholder. Also, there are no restrictions on either the constituents of the prescriptions or the professional fee the pharmacist wishes to charge the patient.... Retail pharmacists do not need to worry about having to submit bills periodically to the insurance companies, as in case of prescriptions paid for by welfare agencies. The bill is paid by the customer....the customer then submits his claim to the company. A signed receipt from the pharmacist is the only necessary proof.**

Other forms of voluntary health insurance also provide coverage for the cost of drugs.

Under various forms of extended coverage contracts, 14 Blue Cross Blue Shield plans made available coverage against the cost of out-of-hospital prescription drugs in 1958 and other plans were preparing to make such coverage available. Certain prepaid group practice or community-wide prepayment plans, such as Group Health Insurance Inc. in New York, cover the cost of drugs on a deductible principle.

Insurance or prepayment coverage against the cost of drugs alone, standing apart from coverages for other medical care costs, have generally been considered impractical. As has been noted by Samuel A. Dreyer, chairman of the insurance committee of the Pharmaceutical Society of New York[9]—

> **Insurance policies written exclusively covering drug and prescription costs will have no appeal to the public, unless they are integrated with other health care coverage.**

This statement appears to be borne out by the experience in Ontario, Canada of a prepaid prescription drug plan, Prescription Services, Inc., formed by the pharmacists in 1958. Enrollment in the plan has been described as "far short of expectations" and the experience under the plan has been so adverse that, despite a 35¢ charge to the patient per prescription, a waiting period and various exclusions to the coverage, the premium rates have had to be doubled.

In October 1959 the formation of another prepaid prescription drug plan, Prescription Service Inc. in California, was announced. Under this plan the California Pharmaceutical Association acts as fiscal administrator and control agent, although the plan is underwritten by an insurance company. It is too recent, at this time, to evaluate the experiences under this plan.

A method of insuring or prepaying the costs of medical care whereby the costs of each form of care are covered under separate contractual arrangements in separate insurers is not the most efficient use of the health insurance dollar. Such an approach involves an overlapping and duplication of administrative costs such as premium collections, benefit payments, claim investigation, sales and advertising, as well as the basic operating cost such as personnel and rent. Unilateral approaches to insuring the various types of medical care costs are, therefore, wasteful in comparison to an integrated approach which covers all the costs of medical care deemed at any time to be insurable.

increasing prescription volume

Drugs have contributed importantly to progress in public health in the United States. They have aided in lowering the national death rate, have sharply reduced the incidence of acute communicable diseases, have relieved untold pain and suffering and in some instances have appreciably reduced the total cost of medical care in treating specific illnesses. Their increasing effectiveness is undisputed. This, in turn, results in increased public demand

(*Continued on page 714*)

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and hence expenditures for drugs. It is not surprising, therefore, to find that prescription volume has increased from an average of 8.5 percent of total drug store sales in 1929 to 29.5 percent in 1956 and that the prescription drug volume in drug stores increased a thousand percent from 1929 to 1956.[10] Drug expenditures, as a percentage of all personal medical care expenditures, have remained relatively constant, however.[11] While the cost of drugs has been rising, the rise is not as great as for other medical care services and about parallels the rise in the cost of food.[12] The result of these interrelated developments will probably be an increased public interest in voluntary health insurance coverages for the cost of drugs as part of the protection against all the costs of medical care.

effectiveness of voluntary health insurance

How effective has the development of voluntary health insurance been to date?

Last year voluntary health insurers paid $5.2 billion dollars in benefits,[13] an average of $14 million a day. This amount was an increase of 10.9 percent over the preceding year and an increase of 90.2 percent over the amount of benefit payments just five years earlier.

What these amounts mean in relation to personal medical expenditures, however, is not a matter which has yet been placed in clear focus. A recent study by the Social Security Administration[14] indicates that the percentage of the nation's total private medical bill being met by voluntary health insurance approximates 25 percent although it had increased three-fold in the decade 1948–1957. The study estimates that in 1957, 57 percent of the amounts received by hospitals from patients and 31 percent of the payments to physicians derived from health insurance sources. These percentages were 27.3 percent and 6.4 percent respectively in 1948. The study states that "insurance benefits for hospital care increased five-fold in the period (1948–1957) and those for physician's services have increased almost sevenfold."

While these data clearly indicate certain aspects of the progress which has been made in the last decade alone, they do not represent an accurate picture of the role being played by voluntary health insurance. To begin with, they relate health insurance benefits to the total of all private expenditures for medical care. This latter amount, however, is a gross, unqualified amount which includes many medical costs which do not fall upon individuals or families in such amount or with such frequency as to warrant coverage by a financing mechanism, whether private or public. To do so can be to simply add an administrative cost to the cost which is already there.

This amount also includes without distinction, such items as aspirin, non-prescription drugs,† sunglasses, water bottles, baby food, scales, toothpaste and toilet tissue when purchased in a drug store. It also includes such items as non-medically dictated hospital care, luxury hospital care and nonmedical accessories such as telephones and TV sets and cosmetic surgery and dentistry. Perhaps no one would argue that any type of insurance mechanism should cover such elements of medical or personal care as these.

There might also be eliminated from such considerations those medical costs which are predictable, elective and budgetable. One example of these is the sizable expenditure for maternity or obstetrical care.†† Another is found in routine dental care.‡ The total of these elements of the private expenditures for medical care is not known. It is readily apparent, however, that in the aggregate they represent a sizable proportion of the whole. Their elimination from the equation would, therefore, indicate, in truer perspective, the importance of the role being played by voluntary health insurance.

Insurance plans, private or public, are never looked upon or conceived as being mechanisms for the total payment of all medical costs in all cases.§ To so conceive of any insuring mechanism would not only make the cost of such an approach unwarrantedly prohibitive but create an approach which would be uneconomic from many standpoints. Unfortunately it is not possible to relate this proposition to the relationship of voluntary health insurance benefits to private medical care expenditures. Its importance, however, is self-apparent.

Private insuring mechanisms also cannot reach maximum efficacy unless all insurable persons who need health insurance become insured and unless the benefits they purchase, or which are purchased for them, are adequate in relation to their needs. In a free economy these choices are made subjectively and in relation to other needs

or desires for which available funds are expended. It is a fallacy, however, to hold voluntary health insurance accountable for the medical expenses of persons who are not insured or for persons who are not adequately insured. Again, if the equation were properly adjusted, the role played by voluntary health insurance in paying for personal medical care would be increased appreciably. Such adjustment would also indicate the tremendous potential inherent in voluntary health insurance. For example, those studies[16,16,17] which do relate voluntary health insurance benefits to the medical expenses of insured persons indicate that some 75 percent to 94 percent of all hospital expenses and some 62 to 76 percent of all surgical costs are covered. While the methodology employed in these studies might warrant some further refinement, it is clear that these studies display a markedly different picture of the role being played by voluntary health insurance than do the Social Security Administration data.

These data, furthermore, include only benefits paid under health insurance plans, overlooking the fact that other types of voluntary insurance play an important role in financing medical care. These include personal accident insurance policies, group accidental death and dismemberment benefits, benefits paid under medical payments, coverage written in conjunction with policies of liability insurance, the portion of liability insurance policy benefits used to pay medical expenses and monies available through the various types of life insurance benefits and used for the payment of medical care. While these amounts cannot be clearly documented in all instances, it is evident that they cover millions of dollars of medical expenses.[18]

In attempting to evaluate the role presently being played by private insurance in helping the American people to meet the cost of unpredictable and unbudgetable medical bills, there is a need for current and meaningful data based upon reliable methodology.

† Drugs, according to the Social Security Administration, comprise some 20 percent of private expenditures for medical care. Of this amount according to Health Information Foundation estimates, 33 percent is for non-prescription drugs.

†† Eight percent of all medical expenditures, according to Health Information Foundation.

‡ Dental care is estimated by the Social Security Administration to be over nine percent of all private medical care expenditures. The majority of this would probably be for routine care.

§ See, for example: President Eisenhower, address before Congress, January 31, 1955, *Summary of Survey of Physician's Attitudes toward Voluntary Health Insurance*, American Medical Association, Becker, Harry, "The Shape of Things to Come," *Northwestern Medicine*, 1955.

Insurance companies today are convinced of the validity of the private voluntary approach as basic to insuring against the serious costs of medical care.

That segment of the population unable to finance the cost of health care for themselves because of their limited or non-existent means, should have assurance that health care is available to them when they need it. To that end, insurance companies support the concept of public assistance programs to supplement the effects of voluntary agencies. As a service to the community, the insurance companies stand ready to make their knowledge and facilities available to assist in the administration of such programs. The public funds available for medical care for the indigent and needy should at all times be sufficient to guarantee medically adequate care. If this were so, much of the present difficulty in financing hospital and medical care would be eliminated and hospital deficits would be greatly relieved.

a challenge—financing medical care

One of the most intriguing and challenging subjects to face American society today is that of providing and financing hospital and medical care.

In any consideration of the subject it is important, above all else, to bear in mind that both medical care and the methods by which it is financed have been and will be engaged in a rapid and complex evolutionary process to such an extent that data, methods, and conclusions rapidly become outmoded; that information is always, of necessity, incomplete, lagging behind the progress which goes surging ahead and that evaluations are not only inconclusive but extremely temporal. While we are gradually finding our way, the field of endeavor, often called medical economics, is still infinitely much more an art than a matter of scientific disciplines. This, then, argues that emotional reactions must be tempered, that patience must be employed despite a marked straining toward impatience, that objectively purposed knowledge must be diligently sought, and that the arbitrary freezing of a pattern, by whatever means, which would cut short much of the progress that is clearly before us, should be avoided like the plague.

The private insurance mechanism is fully aware of the challenge with which it is faced. The coverage provided by insurance companies and prepayment plans has become increasingly effective and adequate. Today, it plays an ever-increasingly significant and vital role in financing the costs of medical care. It has become an important segment of the entire American economy. As such, it relieves the government of the responsibility for using public funds, derived from taxation, to assure adequate medical care for a large proportion of the citizenry.

The continued successful progress of voluntary health insurance in the United States does not depend upon insurers alone, however. Insurers can only make available their facilities to the public. The public, whether as individuals or as persons interested in the welfare of groups of people such as employers or labor union leaders, must choose to purchase the protection offered and in such forms and amounts as to be adequate for their needs. In a free economy these choices can be made subjectively. Insurance has to compete for the available dollar in any instance.

The successful achievement of the goal of voluntary health insurance is also dependent upon the sympathetic understanding and co-operation of all those who provide medical care or who operate or dispense the facilities and means of care. If doctors, dentists, nurses, pharmacists, managers of hospitals and nursing homes and all others who function in direct relationship to the patient, as well as the patient himself, come to understand the purposes, the economics and the processes of the various insurance mechanisms, there is every indication that voluntary health insurance will remain the keystone upon which the serious and unpredictable costs of medical care will be financed in the United States. But if the presence of voluntary health insurance has an inflationary effect on medical costs through the unnecessary use of medical care facilities and services, the use of luxury forms of care, inefficient use of facilities, excessive provision of services, open abuse of the coverage, or the practice of charging more for a given service simply because insurance is present, the fulfillment of the objectives of voluntary health insurance will be handicapped. Insurers will be forced to seek higher premiums from their policyholders. This, in turn, causes questions to be raised by employers who pay so much of the cost of health insurance benefits, by labor unions through whose efforts so many of these plans are negotiated, and by others.

Controls of various types will have to be considered as a means to eliminate unnecessary or excessive claims or restricting the extent of coverages or eliminating certain types of medical care costs from the coverage. Carried to its logical extreme, this could result in the failure of voluntary health insurance and, as a consequence, a public demand for a broad or all-inclusive government scheme.

For out-of-hospital prescription drugs physicians might, perhaps as a result of patient demand, unnecessarily prescribe or overprescribe or pharmacists might increase the cost of prescriptions because of the presence of health insurance. To that extent either the cost of the coverage for drugs will become more expensive or the coverage itself will have to be curtailed or limited or drug costs eliminated from the coverage.

The providers of care have become increasingly aware of this strong interrelatedness between their own practices and the future of voluntary health insurance. Insurance companies have established the Health Insurance Council as a means of seeking their co-operation and providing them with information concerning health insurance. A great deal has been accomplished to date and more recently state and local committees have been established to provide a source of contact at local level.

There is no present indication that this response by the private insurance mechanism to a public demand for protection against serious medical costs will be brought to a halt or even retarded. Contra, it appears reasonable to expect that if so much progress has been accomplished in the past very recent years, and in so many varied areas, private voluntary health insurance will continue increasingly to serve the public welfare. ●

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Paper Chromatography

a process that makes possible the separation of the components of a small quantity of a mixture

A strip of paper (usually filter paper) is spotted with a sample of the material to be analyzed. After the paper has dried, the end nearest the spot is immersed in a suitable solvent, with the paper suspended as shown at right. As the solvent descends the strip, the components of the mixture move at different rates and, therefore, are separated as isolated spots on the paper.

One application of paper chromatography extensively employed by Lilly researchers is in the identification and evaluation of antibiotic activity produced by fermentation of organisms found in soil samples. When separation has been achieved, the chromatograms are laid on agar plates which have been seeded with test organisms. Inhibited growth indicates antibacterial activity due to the antibiotic in that area of the chromatogram. This technic was employed in the isolation of erythromycin.

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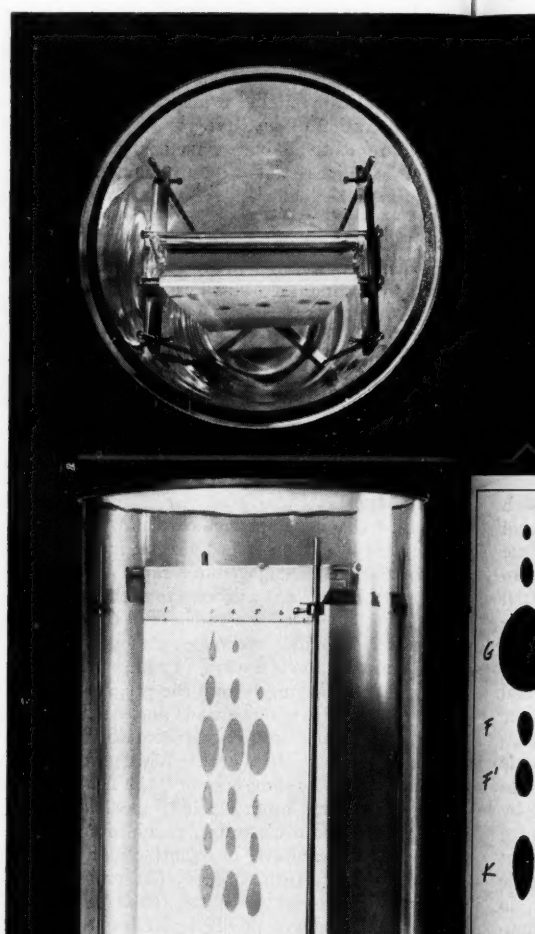

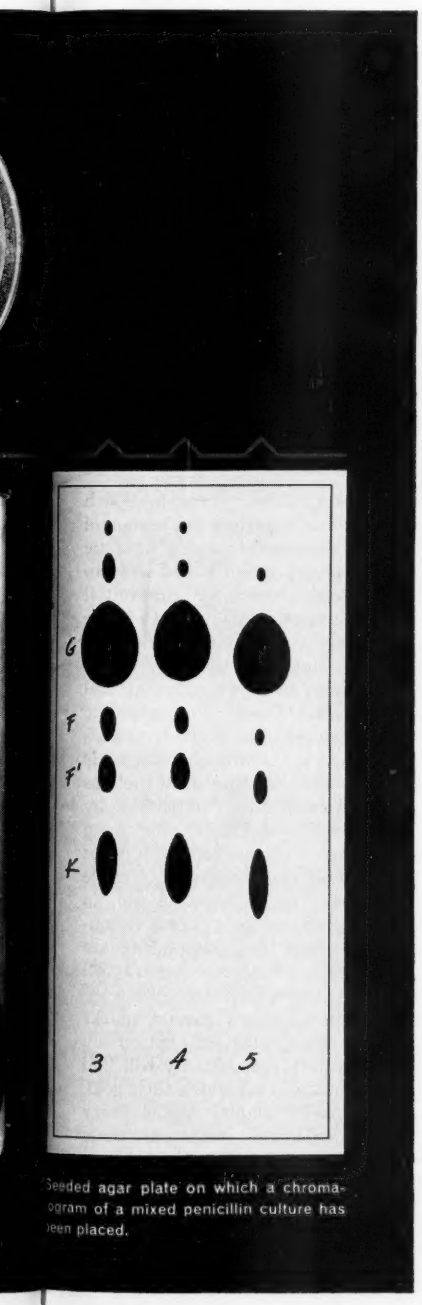

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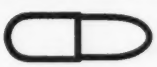

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comments

by Dr. Morris Brand

If 59 nations find national health insurance plans necessary to assure a basic minimum of medical care to all their people, regardless of whether they are retired or employed or of their creed, race, sex, age and ability to pay, then there must have been some demand for such legislation or a realization on the part of governmental leaders that these programs would be of value to their countrymen. The fact that no country, to my knowledge, who has adopted national health insurance has discontinued it indicates that this program has proved of benefit.

While these nations represent many types of political and social ideologies, the method of providing medical services in the respective nations varies in accordance with the patterns and customs which prevailed prior to the enactment of the national plan. This is not necessarily a good thing.

With regard to the growth of voluntary health insurance plans in Great Britain and in Puerto Rico, it would be interesting to learn whether the enrollment is coming from those with lower incomes or those with more ample. In any event, everyone has a basic minimum program for medical services regardless of his ability to pay.

Perhaps we in this country should think along the same line so that those who do not have the dollars to purchase basic medical care will have it available to them, as in the case of public education, and those who wish can supplement it in accordance with their ability to pay additional premiums. This may reduce the chaotic situation that exists today because of the multiplicity of health and hospital insurance coverages. Perhaps it is not the 59 nations but the United States who is out of step with the changes in the socio-political concepts which now include the fact that medical care should be a matter of right to all and not merely the privilege of a few.

Any program for medical care should assure the insured of highly competent, well-integrated modern medical care, but the commercial insurance carriers lack interest with respect to the quality of medical services provided through their insurers. Their interest is centered essentially around two major aspects of their program—actuarially soundness and the resulting profits or retentions.

On the other hand, labor-management sponsored plans such as the Sidney Hillman Health Center, community sponsored plans such as HIP, co-operative sponsored programs such as Group Health in Washington are seriously concerned with the quality of care. This important aspect of a health program plus the complete service feature as compared to partial indemnification has caused consumer groups, including labor, to give more and more attention to the service rather than to the indemnity type plan.

If we do not compare the percentage of coverage achieved with the total national, private medical care bill but compare it only with the expenditures of those who are insured, we may present a healthy picture with respect to the insured but what about the millions who are not or are only partially covered for the initial form of medical care or for limited forms of medical and hospital care. If there is validity as well as hope in the thought that the development of voluntary health insurance will stave off national health insurance, then the coverage of all persons, and their actual total medical cost, must be considered, not only those who are fortunate in having some, even if inadequate, coverage. As long as this part of our daily medical needs are potentially insurable, we must evaluate the present benefits of about 25 percent of the total bill to the potential total coverage and not to the cost of the insured.

The data in the drug field which can be used for actuarial calculation is very fragmentary.

To obtain actuarial data of practical value, a day-to-day study of the purchases of prescribed and over-the-counter medication should be made of specific groups under proper actuarial supervision. This study should cover such factors as age, sex, single individuals, couples, families, various income classes and cost with reference to location of the pharmacies and several other points which may be of interest and value. A second approach would be to develop an informed guess of the actuarial values, calculate premiums and start a group enrollment prepaid non-profit plan as part of existing

To his post as medical director of the Sidney Hillman Health Center of New York, Dr. Morris Brand in 1951 brought experience in the medical and health insurance fields. A 1933 graduate of George Washington University medical school, Washington, D.C., he had two years of private practice before going into medical administration. His career there, stretching over a span of 20 years, has included serving on Mayor LaGuardia's committee on medical care and associate medical director of the Health Insurance Plan of Greater New York. He is also project director of the Committee on Medication Costs.

medical care plans. This approach would be on an experimental basis and an insurance company, union or some type of consumer group would have to underwrite any losses for the initial period. If a detailed house-to-house study is needed, it should be conducted under the auspices of the U.S. Public Health Service as part of its national health survey. There is a need to reduce and spread the cost of medication. There are various acceptable approaches to gain this goal such as prepayment, co-operative purchasing by organized retail pharmacists, obtaining the assistance of the medical professions to use generic names instead of trade names where this is possible and, in special areas, to make use of drug formularies. The more these components are integrated, the greater the benefit will be to all concerned.

Labor and consumer groups, in the absence of any practical action on pharmacy's part, undoubtedly will find ways and means of achieving their goal. The pharmacist should make every effort to discuss this issue with these groups and find some method of establishing prepaid drug plans which are fair to the consumers as well as the pharmacists.

There is fear on the part of some pharmacists that they will lose control of their portion of the prepayment program. May I ask bluntly what control do they have of the situation as it exists today? Wouldn't it be better

comments

by C.E. Tosch

The current growth of private, voluntary health insurance in Great Britain has a parallel in a setting much closer to home—Puerto Rico. For the past several years the Puerto Rican government has been providing health care through a public medical plan. Although this program provides aid only for persons classified as "medically indigent," recent estimates indicate that approximately 85 percent of the population qualify under the liberal administration of the program.

From this one might assume that a voluntary health insurance plan requiring employee contributions would have little or no appeal to the majority of Puerto Ricans. But, as in Great Britain, the contrary seems to be true.

A few years ago, we made a contributory insurance plan available to our Puerto Rican employees. Despite the fact that many of them might qualify for health care under the government plan, about 95 percent of these employees enrolled. Why did they do it?

Very likely for the same reasons many people elsewhere have rejected public medical care in favor of private health insurance—

- ▶ they prefer prompt medical attention over the long waiting-lists for hospital accommodations and doctor's attention that typify public care programs;
- ▶ they prefer a free choice of doctors and hospitals;
- ▶ they prefer personal attention over the mass approach of public plans;
- ▶ they prefer the opportunity to tailor the amount and type of medical coverage to their personal needs;
- ▶ they prefer the personal dignity of private arrangements.

The continued growth of voluntary health insurance in this country is essential because the private insurance mechanism is the only reliable means of assuring individual freedom of choice in the selection of medical services. In addition, private health insurance is also the best means for achieving the continuous innovation needed to provide an ever-widening scope of coverage to meet the individual's personal needs. There is serious question whether such innovation would be forthcoming under a government-financed, government-controlled health care program. Most of the progress in many areas of our economy—including health insurance—has been provided through the private enterprise system.

We should recognize that truly voluntary insurance programs cannot, *and are not intended to*, cover every dollar of an individual's expenses. The soundest insurance programs take over after expenses have passed a budgetable amount. This provides insurance where insurance is truly needed and it allows for the creation of a broader range of good insurance values at reasonable cost.

An insurance program designed to cover medicines and drugs only would be heavily burdened with expensive administrative costs involved in processing the multitude of small claims that would inevitably result from such a program. The cost of drugs can best be handled as part of the overall coverage provided by a comprehensive plan. A well balanced health insurance plan covers the cost of drugs and medication used outside hospitals.

Through the mechanisms of deductibles and co-insurance modern insurance programs place a degree of responsibility for medical costs upon the insured individual.

However, he cannot do the job alone. The responsibility for maintaining reasonable costs must also be shared by those who supply the required goods and services. These people must also do their utmost to see that all services are necessary and that all charges are reasonable. Otherwise we may one day kill the goose that lays the golden egg. No voluntary insurance program can survive in the face of run-away medical charges which automatically boost the price of the insurance itself.

As a consultant—employee benefits with General Electric Company, Charles E. Tosch is bringing his past experience into play. He has been on the staff of Johnson and Higgins, employee benefit consultants, and has worked with Lever Brothers Company and the Prudential Insurance Company. A member of the executive committee of the National Committee on the Aging, Tosch has also served as vice president and trustee of the Council on Employee Benefit Plans and is a member of the American Pension Conference. Active in civic affairs, he is also an associate of the Society of Actuaries.

Insurance does not *create* money. It is merely a mechanism for redistributing money collected from all insured to those who have a loss.

The AMERICAN PHARMACEUTICAL ASSOCIATION and each pharmacist individually can be of inestimable help in this task by continuing to do all he can to assure that those broad insurance plans covering drugs and medicines are not burdened with unnecessary or excessively priced pharmaceutical charges. ●

Brand

(*continued from page 718*)

for the pharmacist to present a workable plan, of value to the consumers as well as to themselves, integrated with existing plans as part of a total package of medical care offered for group enrollment rather than to establish drug coverage only programs with costly overhead which in themselves may have limited appeal to the public. However, pharmacy should not limit its thoughts and actions only to the profit-making types of insurance carriers. The non-profit consumer and community sponsored prepaid programs must be included in the planning or they will continue to move ahead on their own.

Mr. Follman stresses the point that having separate organizations for each type of coverage possible will not permit the most efficient use of the health insurance dollar and that the establishment of a multiplicity of insurance companies for each type of service creates unnecessary expense in duplication of cost and, of course, a rise in premiums. Serious consideration of this point should be given by the planners of prepayment programs now and not later when public criticism is aroused and it is difficult to uproot deeply ingrained patterns.

I suggest that pharmacy keep pace with the everchanging socio-economic patterns. Pharmacists should not let the concept of free economy and free enterprise act as blinders or restrain their knowledge and ability to work with all the consumer groups to develop the best solution to this problem now confronting them and the people. ●

trend of . . .

wholesale prices of ℞ drugs

by John M. Firestone*

The prices and costs of drugs have quite suddenly been spotlighted by the Kefauver subcommittee on antitrust and monopoly and brought to the attention of the American public. Particularly dramatic was the assertion by the Committee's economist, Dr. John M. Blair, that the manufacturers' markups on drug specialties to the pharmacist were as high as 1,118 percent, and to the public 7,079 percent. These charges produced headline stories across the nation. However, within a day following this sensational disclosure, many newspaper editors across the land, after sober reflection, denounced these assertions as misleading.

A study of wholesale prices for ethical prescription pharmaceuticals over the past decade was made not to condone or condemn the pricing policies of pharmaceutical manufacturers but simply as a statistical study, a fact-finding mission, based on the best known and most valid technics for measuring changes in the price level of drugs.

Too often the costs of drugs and the prices of drugs are confused and changes in drug costs are thought of as changes in drug prices. The principal distinctions between these two concepts are—

1. If we increase or decrease the quantity of drugs we use, our drug costs rise or decline correspondingly. *But this is not a price change.*

2. If more expensive or less expensive drugs are substituted for those previously prescribed by doctors, our costs change, *but not our prices.*

3. If a new drug is more efficient than its predecessor in the sense that it effects a cure in a shorter period of time and with fewer doses, *this is a change in costs, not prices.*

4. The introduction of new drugs, such as tranquilizers and the Salk vaccine, where none previously existed, increases the cost of drugs, *but does not increase prices.*

5. The drug costs in treating an ailment may have increased because new and more costly drugs were used, but the total cost of the illness, including medical and hospital bills, may be lower.

6. A discussion of drug costs can present a fair picture of costs only if account is taken of the savings resulting from shorter periods of incapacitation, shorter hospital stays, alleviation from pain, avoidance of costly and dangerous surgery, to say nothing of lives that have been saved.

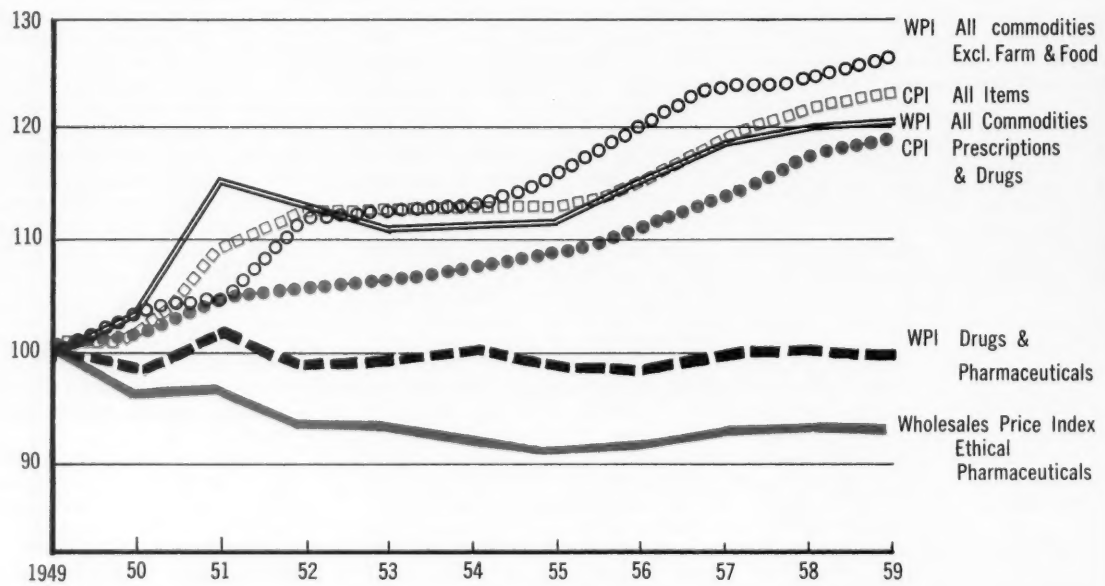
There is little information on the subject of illness or changes in its cost. Studies, except in isolated instances, present imponderables such as the age of the patient, his vigor, severity of the illness and other factors which too often make direct comparisons difficult and produce results of doubtful validity.

However, some indication of the advances in drug therapy may be found in a study by Lucy M. Kramer of the Public Health Service in her article

* Presented at the 1960 convention of the AMERICAN PHARMACEUTICAL ASSOCIATION in Washington, D.C.

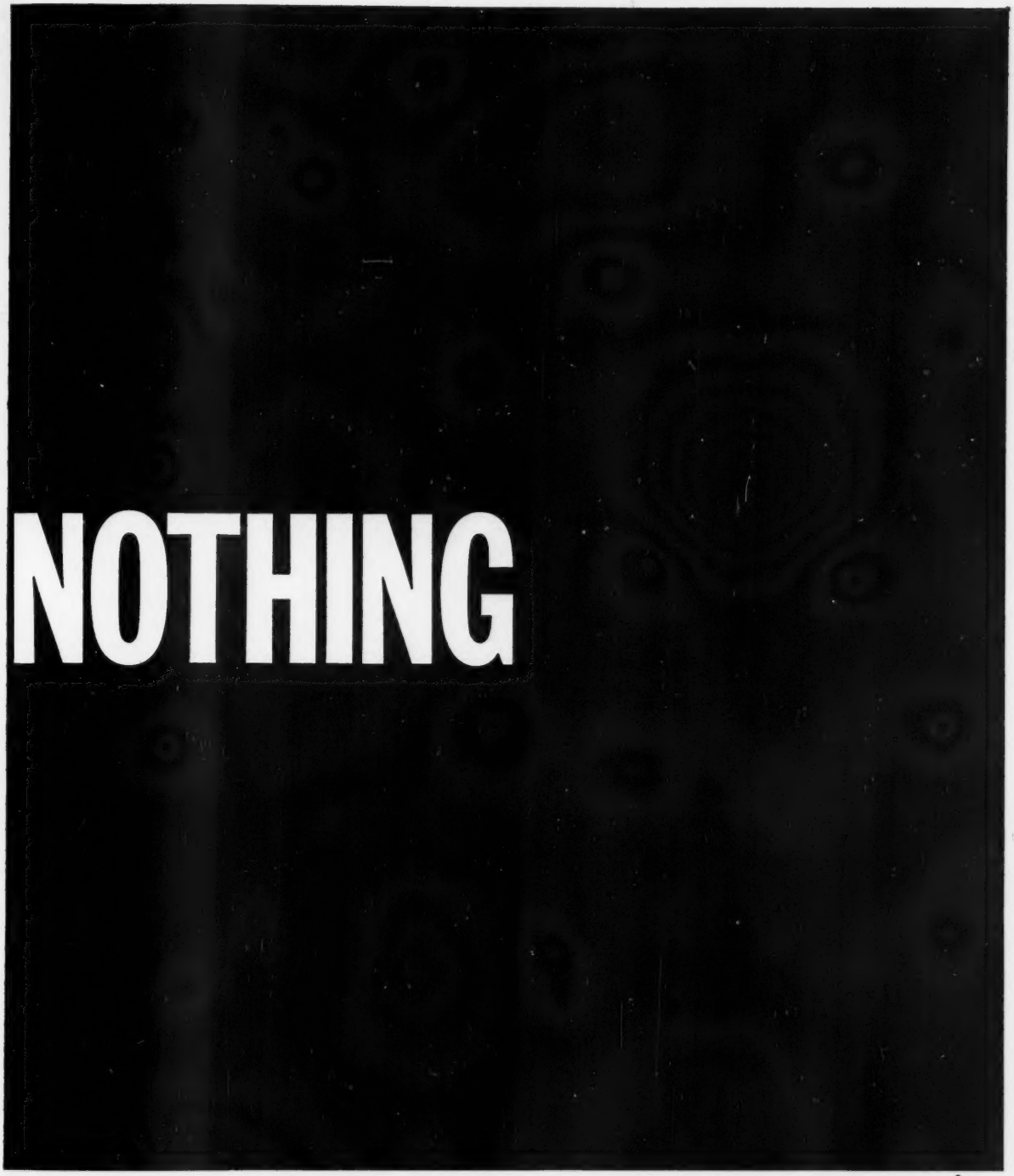
CHART 1

PRICE INDEXES 1949-59



1949 = 100

"The WPI and CPI Indexes are prepared by the U.S. Bureau of Labor Statistics"



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- in controlling inflammatory and allergic disease, DECADRON is without qualification the most potent of the corticosteroids
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Associate professor economics of the College of the City of New York, John M. Firestone also serves as assistant and advisor in the New York regional office of the U.S. Bureau of Labor Statistics. Since 1929, even before his graduation, he has been teaching at the College of the City of New York. His career has included an MBA degree from CCNY and a PhD from Columbia University as well as government and business research experience. He has developed and taught courses in statistics, index numbers, time series analysis, correlation, business cycles and graphic presentation. To his credit also are several articles, booklets and monographs on indexes, statistics and business cycles.

entitled "Drugs and Medicines" published in *Public Health Reports*, October 1958. She reports that—

20 years ago a case of lobar pneumonia meant five weeks in a hospital, long convalescence and $300 to $400 for doctors, nurses, medicine, oxygen and hospital care. Today it means two weeks of illness, generally at home, back to work immediately thereafter and $15 to $30 for drugs.

30 years ago the treatment of mastoiditis cost at least $1,000, required surgery and involved the possibility of permanent impairment of hearing and loss of life. Today $15 worth of antibiotics clears up most cases without surgery.

35 years ago, the son of President Coolidge died of septicemia, despite the best of medical care. Had sulfa drugs been available, his life would have been saved and he probably wouldn't have spent a single day in bed in the process of recovery.

Today syphilis is often cured or at least brought under control with one shot of long-acting penicillin. In the United States, penicillin has completely supplanted other forms of therapy such as arsenic and bismuth.

New drugs have helped to reduce deaths from tuberculosis. Between 1946 and 1955, a mere ten years, the tuberculosis death rate dropped from 34.9 per 100,000 to 9.1 per 100,000, a decrease of almost 75 percent. Many patients are now cured at home in a small fraction of the time and cost it took when prolonged rest in a sanatorium was the major technic.

The recent discoveries of drugs for the treatment of mental illness have made possible the return from mental hospitals of thousands of patients to their homes and communities.

The treatment of many illnesses in the home instead of in the hospital makes the families of these patients more keenly aware of drug expenditures. Many of these people had been state wards in mental hospitals and tubercular sanitoriums where their drug bills had been borne by the state.

This is but a small fraction of the savings that new drugs have produced in restoring health, in speeding recovery and in saving lives. But none of these studies tells us what has happened to the price of drugs. For this purpose we have used the well-developed technic of price indexes.

what is a price index?

It is really a very simple device for measuring composite price movements with respect both to their magnitude and to their direction of change. It is literally impossible to do this by merely examining the price movements of numerous individual items of varying degrees of importance. An index number is a tool for combining these diverse elements into a single composite number which, when properly constructed, gives a reasonably accurate picture of price behavior.

We have all remarked, at one time or another, that "prices are going up" and, much more rarely in these times, that "prices are going down." When we do this, we are not thinking of individual items but we are thinking in what might be called "index number terms," that is, the average price behavior. However, the need for taking account of the importance of the individual items can readily be seen from the fact that a change in the price of milk is of far greater importance to the average family than a similar change in the price of tea. Weighting the items in an index serves the purpose of putting these price changes in their proper perspective.

Index numbers have a long history. The earliest known index was constructed in the eighteenth century by an Italian, Carli, in an effort to measure the effect of the heavy importations of gold and silver from the New World on prices in Europe. Since that time sporadic attempts to measure price changes have been made. The modern history of price indexes in this country dates from the beginning of this century.

A Congressional investigating committee, looking into the effects of tariff laws on the economy, concerned itself, among other things, with the effect these laws had on prices. This study, eventually turned over to the Labor Department to maintain on a current basis, has been computed continuously since that time and has become known as the Wholesale Price Index. During this period of time the index was constantly improved and expanded and today it is the best index of its kind in the world and one of the important tools of economic analysis. It is an important factor in setting up government economic policies, in the monetary policies of the Federal Reserve System, in measuring the levels of economic activity and the purchasing power of the dollar and in short- and long-range planning by private industry.

So important have price indexes become for these purposes that specialized ones have been developed to measure the differential movements of prices in the various sectors of the economy. Thus, we have comparisons between raw materials and finished goods, consumer goods and producers goods, durables and non-durables, etc. Private industry, to meet its own needs, has developed price indexes for individual industries and even company indexes to compare with broader categories of prices.

The needs of the pharmaceutical industry in this respect dictated the formulation of the index of wholesale prices for ethical prescription pharmaceuticals. This index measures the changes in the prices paid by pharmacies for specialty drugs used in filling prescriptions. It measures changes in prices only. It tells us nothing about the changes in the kinds or amounts of drugs prescribed by physicians or the total amount of money spent for drugs. Because these changes do take place, it is the statistician's duty to adjust for these factors in constructing the index. If this were not done, we would get into the realm of drug costs.

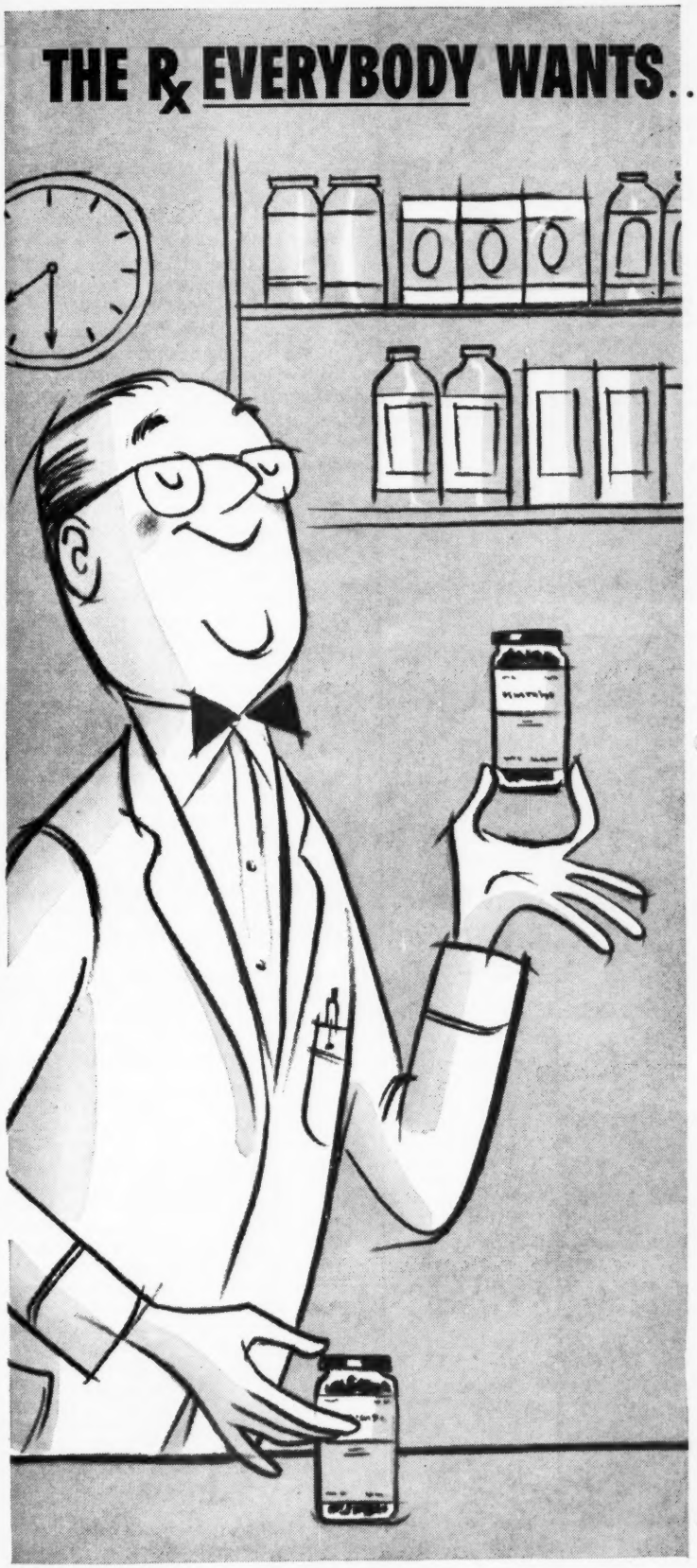
This index is an annual index—prices are measured once a year—covering the period from 1949 through 1959 (*see chart 1 on page 720*).

Constructing this index involved the development of answers to a series of problems the most important of which were—

1. What drugs should be included?
2. How should the drugs be classified?
3. Where should the date on prices and importance be obtained?
4. How many drugs should be included in each group in our classification scheme to get adequate representation of importance and price movements?
5. What is the relative importance of each drug within a group and of the groups to each other?
6. What should be done about keeping the list of drugs current and realistic, so that drugs which have disappeared almost completely are excluded from the index while at the same time the new drugs as they appear on the market are introduced into the index?

(*Continued on page 724*)

THE Rx EVERYBODY WANTS.... SPEEDY RELIEF



And *speedy relief* depends, of course, on immediate availability of the medication.

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PERITRATE®
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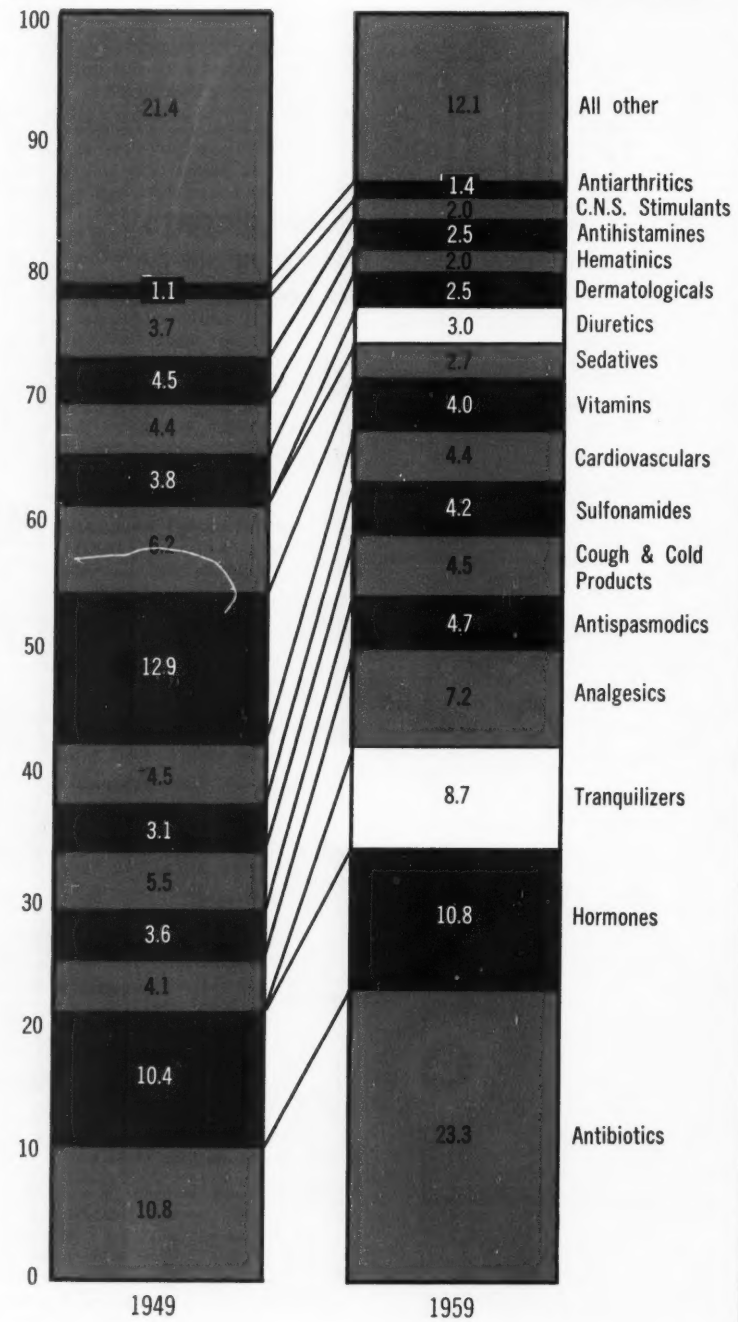
WARNER-CHILCOTT MEANS FAIR PROFIT ● FAST TURNOVER ● FULL PROTECTION

CHART 2

RELATIVE IMPORTANCE OF THERAPEUTIC GROUPS

INDEX OF WHOLESALE PRICES OF ETHICAL PHARMACEUTICALS
1949 & 1959



7. What base period should be used?
8. How many technical problems are involved in constructing this index?

The available data were studied, and after expert consultation, it was decided to classify drugs according to their therapeutic use in new specialty prescriptions (*see chart 2*).

The 16 therapeutic groups in recent years alone account for more than 80 percent of the dollar volume of new prescriptions written. In 1958 the indexed specialties accounted for no less than 30 percent of all specialties in the vitamin-nutrient group and up to 85 percent in the antiarthritic-antirheumatic group. When a drug might properly be classified in more than one category, it was classified according to its most important application.

It might be interesting to observe how changes in drug usage have changed the relative importance of these groups. In 1949, the three most important groups were vitamins, antibiotics and hormones. They accounted for 12.9, 10.8 and 10.4 percent respectively of consumer dollar expenditures for all new prescriptions for ethical pharmaceutical specialties. In 1959, the three most important groups were antibiotics, hormones and tranquilizers. The contribution of these groups was 23.3, 10.8 and 8.7 percent respectively. Antibiotics more than doubled in importance. Hormones remained virtually unchanged. Vitamins, most important in 1949, declined to ninth place in the 16 therapeutic groups. Tranquilizers, unknown in 1949, became the third most important group.

1. The data both on prices and sales volume, which were used to determine importance, were derived from *Drug Topics Red Book* and represent the prices prevailing at the time it went to press in each year.

2. To assure adequate coverage in each group, the five specialties that led in dollar volume in each of the 11 years were listed. If the item appeared in any year it was included in the index as long as it appeared on the market. For each specialty, the most important dosage form is used to represent the prices of all the dosage forms for that specialty. For many specialties only one dosage form exists. Where divergent price movements for different dosage forms were noted, a sufficient variety of dosage forms to portray adequately the price movements of the specialty is used. Thus a total of 308 specialties appear at one time or another. Of these, 99 or less than a third were in existence in 1949; 66 have virtually disappeared from the market and only about one-fifth, or 68, have existed continuously (*see chart 3*). The 1959 index is based on 242 items.

3. The base period for the index is 1949, the first year for which data are available. This base is the closest to the 1947–49 base

(*Continued on page 726*)

Why Unicap vitamins are mixed under a blanket

Surgeons are not content with merely sterilizing all the equipment in the operating room. They add ultraviolet lamps to sterilize the very *air* in which they work.

In making Unicaps, Upjohn goes even further. They actually *remove* the air – which automatically removes any possibility of air-borne contamination.

This is done by mixing the vitamins under a blanket of carbon dioxide which, being heavier than air, forces all air out of the vats.

And, because some vitamins break down in the presence of air, this removal of air has the added virtue of protecting the *potency* of Unicaps.

This is only one of hundreds of separate safeguards used in the manufacture of Unicaps. And this is another reason why . . .

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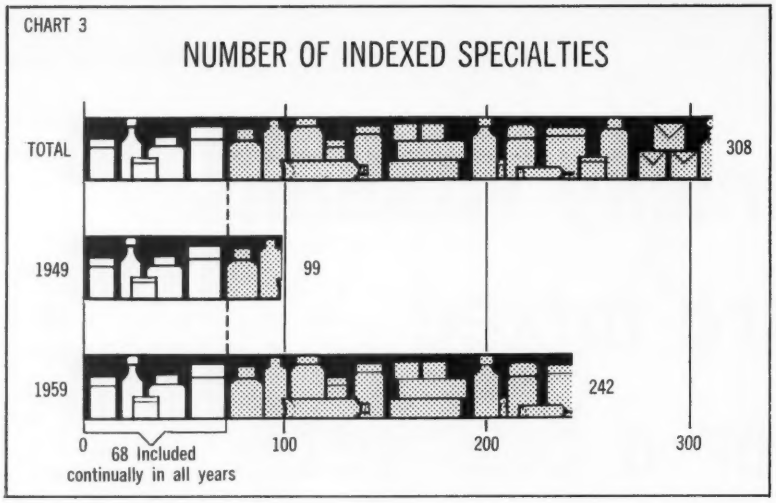
Upjohn

THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN

Medicine . . . designed for health . . . produced with care

CHART 3



used in the government price indexes. Thus, comparisons with the government indexes can be made most readily.

The method of index computation is known as a chain index of weighted price relatives. This technic provides the flexibility necessary to change weights as often as may be necessary (and in this index the weights are changed every year), to introduce new drugs when they become of sufficient importance for inclusion in the index and at the same time to permit the dropping of items when they decline in importance or disappear from the market without invalidating the comparability of the index over time.

What does this index show with respect to price movements?

It shows that the wholesale prices of ethical pharmaceuticals have declined more than seven percent since 1949. This contrasts with the 20 percent increase in all wholesale prices as measured by the Bureau of Labor Statistics index of wholesale prices. If farm products and foods are excluded, the rise in wholesale prices is 27 percent. In this same period, consumer prices have risen 22 percent (*see chart 1*).

A subgroup of the Bureau of Labor Statistics wholesale price index is called "drugs and pharmaceuticals." This consists of 40 ethical and proprietary drugs and pharmaceuticals, including such items as citric acid, agar, ethyl alcohol, chloroform, cod liver oil, glycerine, gum arabic, iodine, menthol, penicillin, sulfadiazine and vitamins B_1, B_2, C and D. This index does not include any cortical steroids, tranquilizers, broad spectrum antibiotics and the newer forms of vitamin products. The majority of the items in the BLS index are long standing basic ingredients, particularly for proprietary drugs, but they are an inadequate reflection of today's prescription market. Even for this less representative list of drugs and pharmaceuticals, prices in this period of time have declined 0.2 percent.

The prescription and drug component of the consumer price index, that is, retail prices for drugs, has risen nearly 20 percent since 1949, somewhat less than the rise in all retail prices. However, this index consists of the following six items—three prescription items (APC tablets, elixir terpin hydrate with codeine and buffered penicillin) and three nonprescription items (aspirin tablets, milk of magnesia and vitamins) —a woefully inadequate and unrepresentative list.

This index is now being revised and expanded to 18 items to include pharmaceuticals from 8 of the 16 groups in our index. While this is a considerable improvement, it is still too small to represent the retail drug market adequately. But before hastening to point an accusing finger at the Bureau of Labor Statistics, it must be borne in mind that drugs constitute less than one percent of consumer expenditures. The Bureau with its limited funds cannot afford to spend additional money for broadened coverage of this group without seriously impairing the quality of the over-all index. As a result of the current revision of the drug group, six percent of the items in the index will be drug products, yet this component is less than one percent of total consumer expenditures.

It is eminently apparent that while the government indexes in this area are adequate for the role they play in measuring the course of all prices in this country, they cannot serve as satisfactory measures for this industry.

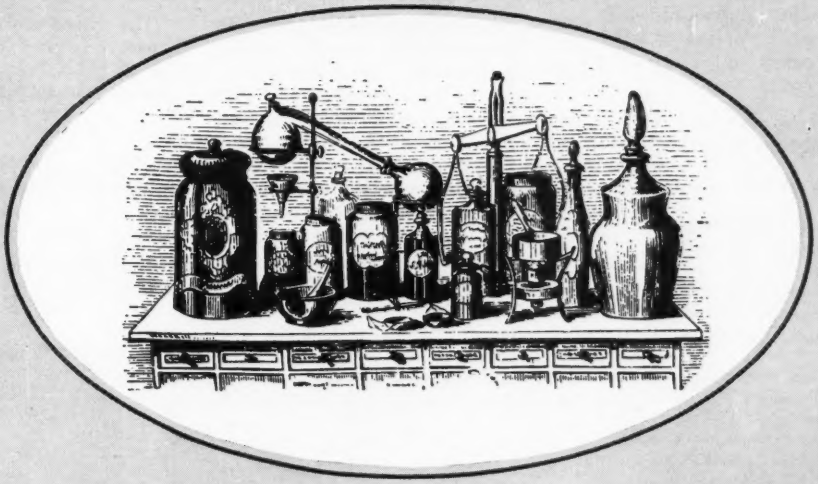
Since 1949 our index shows that the sharpest price declines were in the two most important groups. Antibiotics, which constitute in value nearly 25 percent of all new ethical prescription pharmaceuticals, have declined more than 50 percent in price. Hormones, which have an importance of more than a tenth of all pharmaceuticals, declined 40 percent in price. The remaining groups showed smaller changes—some up, some down.

Drug prices declined four percent between 1949 and 1950, three percent between 1951 and 1952 and one percent between 1953 and 1954. Between 1956 and 1957 there was a one percent rise. Since 1952, drug prices have remained quite stable. In this same period of time, according to the Bureau of Labor Statistics, all commodities other than farm products and foods rose 13.5 percent, chemicals 5.3 percent and drugs and pharmaceuticals, 1.3 percent. This discrepancy between our index which has remained stable and the government index which shows a rise of 1.3 percent, small as it is, is largely due to the absence from the BLS index of the newer drug products, such as corticosteroids, which have declined in price since 1952.

Much has been written and said about the high price of drugs. Senator Kefauver in his speech in the Senate on administered prices (March 22, 1960) stated "to a large proportion of the elderly people, many of whom live on small, fixed incomes, the price of drugs constitutes something of an economic crisis." Later in this speech he accepts the statement of Senator McNamara that "the average person over 65 spends $42 per year for drugs and medication." Senator McNamara goes on to add that "three out of every five people over the age of 65 in this country have a money income of less than $1,000 per year." To which Senator Kefauver replied that this "emphasizes the reason why the older people have a very hard time obtaining the high-priced drugs which they need so badly."

Is not the problem of the elderly then the inflation, not of drugs which have declined in price but of food, housing and medical care other than drugs which has reduced to less than half the purchasing power of what should have been an adequate income? It is ironic to note that the increase in the number of older people in our country is to a large extent due to the new life-saving drugs. The very industry which has contributed so much to the prolongation of life is now being held responsible for the economic plight of those whose lives it has helped to preserve.

Mandatory retirement rules prevent these people from earning their living and make it necessary for their meager savings to be stretched over a longer retirement period. Even if these elderly people received their drugs free of any charge their economic difficulties would not be solved. The solution to the problem is in restoring the purchas-



COMMON SENSE *vs.* NONSENSE

one of a series of classic quotations dealing with subjects of interest to you

"It's unwise to pay too much, but it's worse to pay too little. When you pay too much, you lose a little money—that is all. When you pay too little, you sometimes lose everything, because the thing you bought was incapable of doing the thing it was bought to do. The common law of business balance prohibits paying a little and getting a lot—it can't be done. If you deal with the lowest bidder, it is well to add something for the risk you run, and if you do that you will have enough to pay for something better."

—John Ruskin
(1819-1900)

SMITH KLINE & FRENCH LABORATORIES, PHILADELPHIA

ing power of the fixed incomes of our pensioners. If this is to be achieved by rolling back prices, then all prices should be rolled back—a well-nigh impossible task.

It is time for the pharmaceutical industry to appraise the nation of its achievements on behalf of mankind. It is time to point out that—

▶ seven out of ten prescriptions today call for drugs unknown to medicine prior to World War II

▶ 90 percent could not have been filled 20 years ago

▶ the practicing physician could not achieve the remarkable recoveries for his patients without modern drugs

▶ the research physician could not make his discoveries of new healing agents without the subsidization of the pharmaceutical industry

▶ this is, in fact, a most remarkable story of progress in drug therapy

▶ this represents an untold reduction in mortality and human suffering and millions, perhaps billions of dollars saved through reductions in medical bills and in periods of incapacitation and hospitalization and through restoration to a productive life

▶ these savings alone are probably greater than our entire drug bill

Could these advances in life saving and health protection have been achieved without the uninhibited research expenditures of the pharmaceutical industry? Would the industry indulge to the extent that it does in the long, expensive and risky process of developing new products if there were danger of firms being thrown into bankruptcy in the process?

These tremendous advances in the saving of lives and the mitigation of disease could not have been possible if practicing pharmacists had not made these products available at the time and place of their need, in large cities, in manufacturing centers and in small towns. We know the public does not appreciate the enormous cost involved in providing these patient services.

The industry should not again be subjected to unfair attacks of profiteering and price gouging. It should develop its own authoritative analyses of prices at the wholesale and retail level to understand and show more fully what really is happening; to show how successful this industry has been in controlling price inflation. There is today no adequate measure of retail drug prices, of what has happened to the prices consumers pay for their prescriptions. Careful studies should be made of costs of production, productivity of the industry, costs of distribution and obsolescence rates, so that sensitive indicators of changes in costs are more quickly available and equitable pricing may be maintained. The pharmaceutical industry may well be proud of its record but it should develop the statistics needed to tell its story. ■

careers in pharmacy

regional science fairs

The scope of the National Science Fair International is widening steadily with the affiliation of additional fairs to encourage the development of potential scientists in this country. It is possible for pharmacists to co-operate with the local fairs and increase the awareness of young high school students for the profession of pharmacy. Attention is called to the affiliation of new fairs where pharmacists are urged to offer their services and establish awards—Western Colorado Science Fair, Mesa, Colorado; Northeastern Indiana Tri-State Science Fair, Angola, Indiana; Rockland County Science Fair, Nyack, New York; Texas District III Regional Science Fair–Southern Division, Harlingen, Texas; Wiley College Science Fair, Marshall, Texas; Vermont State Science Fair, Knights of Pythias First Fox Valley Science Fair, Appleton, Wisconsin.

women in pharmacy

Opportunities for women in pharmacy are included in a recent issue of *The Education of Women*, a publication of the American Council on Education. The issue features careers in the health services and for additional information about pharmacy refers the readers to the APhA brochure, "See Your Future in Pharmacy," and to the Kappa Epsilon booklet, "She Is a Pharmacist."

workshop in prepharmacy

A pre-pharmacy workshop for Duval County (Florida) science teachers of junior and senior high school students heard talks by Dr. Lauretta E. Fox, past chairman, Board of Florida Foundation for Future Scientists and Associate professor of pharmacology, college of pharmacy, University of Florida. She discussed "The Organization, Aims and Program of the Florida Foundation for Future Scientists and Its Relations to Regional, Local and National Fairs" and "The Criteria for a Good Science Fair Project."

grant-in-aid scholarship

A plan to provide financial assistance for a deserving pharmacy student is underway in Santa Monica, California. The Women's Auxiliary to the Santa Monica Bay Area Pharmaceutical Association held its first annual dinner dance recently to raise funds for the establishment of a grant-in-aid scholarship to be awarded annually. This farsighted group of women has recognized a valuable recruitment tool to encourage young people to enter and continue their professional study.

health careers organization

The critical shortage of hospital personnel prompted the development of a new organization called Health Careers

for Western North Carolina to encourage and assist high school graduates to enter the health field. The non-profit corporation has assembled information about health professions and is ready to provide it to inquiring young people; visits may be arranged to hospitals, laboratories or professional schools; interviews will be set up with someone practicing the profession in which the student is interested; scholarship applications are handled and a monthly newsletter is published.

college financing

How About College Financing is a new publication of the American School Counselor Association to guide parents and college-bound students on this ever-present problem. It has valuable information about loans, scholarships and grants as well as a bibliography of supplementary references. The booklet may be obtained from the American Personnel and Guidance Association, 1605 New Hampshire Avenue, N.W., Washington 9, D.C., for 30 cents per copy.

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more patients are receiving the benefits of—

more clinical evidence exists for—

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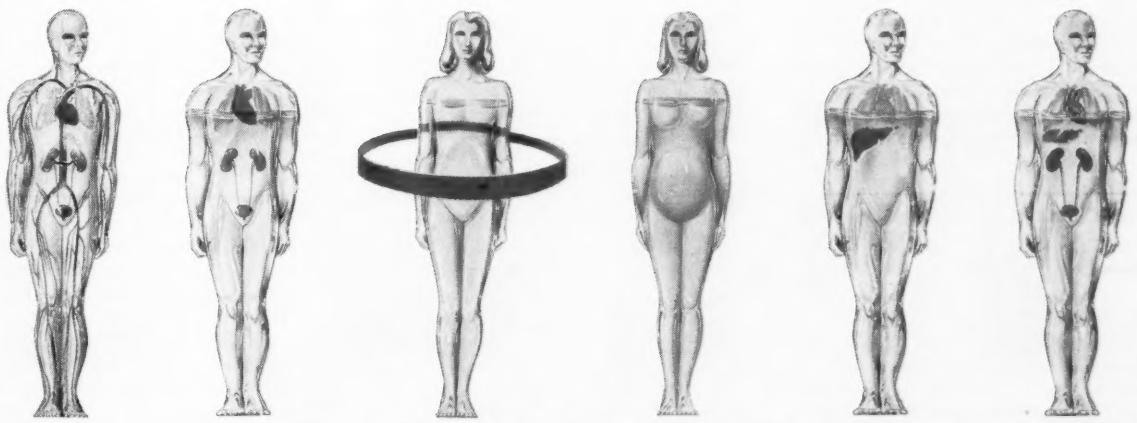


HYPERTENSION **CONGESTIVE FAILURE** PREMENSTRUAL TENSION **EDEMA OF PREGNANCY** CIRRHOSIS WITH ASCITES **RENAL EDEMA**

prescription pricing

(*Continued from page 702*)

on a ten-dollar item may produce excessive profits at the expense of the consumer. It is also possible that enforced, uniform pricing at markups sufficiently high to permit low-volume pharmacies to operate at a profit will provide the impetus for entry and survival of more new, low-volume stores, the efficiency of which also may be questionable in terms of available demand and necessary operational expenditures.

An excellent discussion of "Some Implications of Pricing Pharmaceutical Service" appears in THIS JOURNAL (July 1959). Charles K. Jewell presents some specific aspects of service for which compensation is necessary and offers one solution as practiced in California's San Gabriel Valley. The method proposed serves to substantiate the implication that manufacturer-suggested prices based upon an arbitrary margin tend to hold down prescription revenues and profits when these prices are adhered to without reference to actual costs of the service rendered or are adhered to as *maximum competitive prices*. When the practice of manufacturer-suggested prices was started 29 years ago in a highly competitive, depressed economy, it was intended to suggest minimum prices.

The pricing schedule or formula proposed by Jewell suggests a 40 percent margin on the actual amount of the drug used plus a professional fee of $1.50 per prescription. The professional-fee philosophy is desirable as a standard charge and may vary according to local conditions. If the 40 percent margin is intended to cover operating costs, it is improperly applied. Cost theory and practice are based upon the premise that functional costs for both direct and indirect expenses of production are not a function of material costs of the product but of the costs of operation. If the professional fee represents charges of 90 cents for overhead and labor plus 60 cents for a return on these costs only, then the method may be considered proper and a real step forward in pricing. The result would be the same as a charge for material costs plus 90 cents production cost plus a 40 percent profit on all costs. The only question to be answered then is—*does a 40 percent net profit constitute a reasonable or necessary professional profit?*

By this procedure a product with a material cost of $1 would sell for $1 plus 90 cents or $1.90 plus a markup of 66.7 percent to a total of $3.20. A product with a material cost of $10 would sell for $10 plus 90 cents or $10.90 plus a markup of 66.7 percent to a total of $18.20. These are the same prices as would be obtained by marking up the cost to get a 40 percent margin and adding a professional fee of $1.50. Such a policy permits any increases in operating costs to be added to the professional fee as a standard addition to all prescriptions. Any additional costs for compounding time are absorbed in the interest of maintaining a flat-rate professional fee. These same costs would produce selling prices of $1.70 and $16.70 if the products were sold at the usual manufacturer's suggested prices.

Standard costs are determined on the basis of past experience and future expectation for each item of expense on each operation at the level of optimum efficiency. All control emphasis is placed on studying costs of operation rather than costs of products. It is primarily through a control of costs that profits are attained or increased. Since modern drug therapy relies heavily on manufactured specialities for which the wholesale prices for individual products are somewhat the same for the majority of pharmacies (or can be made the same by using the cost of a bottle of 100 or a comparable liquid measure), the future of prescription pricing for profits fair to both patient and pharmacy lies in the analysis of costs of operation which can be attributed to both the distributive and professional functions of the prescription department.

rationale

The development of a rationale for prescription pricing is now possible by summarizing the facts and assumptions offered and general knowledge of the subject not discussed here. It should be possible to develop definite policies for pricing from this rationale, if it is to serve a useful purpose in the management of prescription departments.

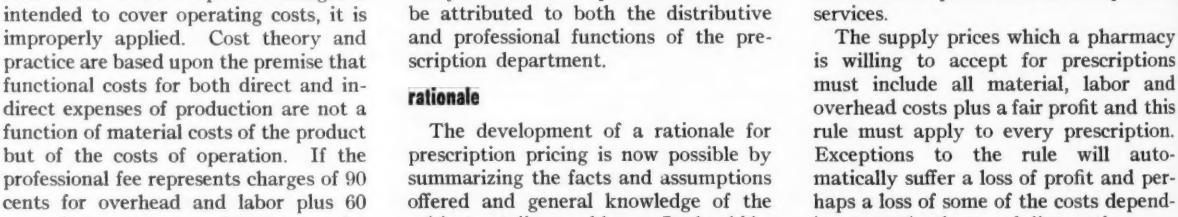
Prescription merchandise and professional services react to the laws of supply and demand. They must be offered at prices which attract competent professionals to assume the functions and risks attached to their offering and at the same time provide fair values to the consumer-patients whose demand for the goods and services is based upon a calculated need over which they have little or no control.

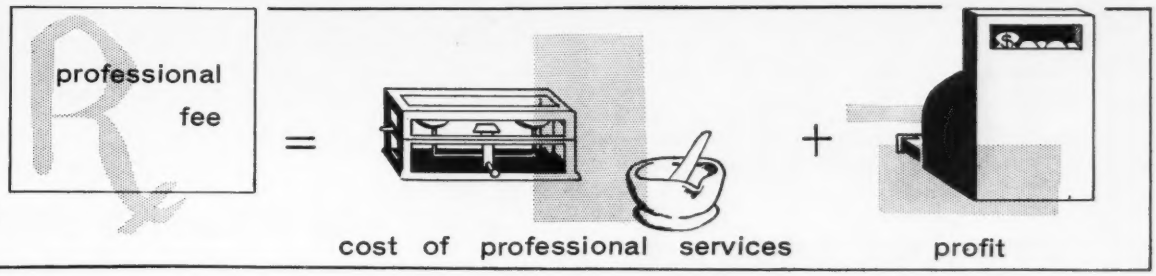
The demand for prescriptions is dependent upon the demand for physicians' services and is elastic to this extent. However, for any given demand for medical care there will be a resulting number of prescriptions, the products of which have been prescribed primarily for their therapeutic values rather than prices. It is doubtful that price competition between and among pharmacies will stimulate or retard the writing of prescriptions under normal conditions.

The lack of effect of price changes on demand leads to a general price stability among pharmacies which handle highly standardized goods and compete on the basis of differentiation of location, layout, personal confidence and professional services. Therefore, any tendency to lower prices merely for competitive advantage does not guarantee increased sales to cover potential losses in revenue, which can become actual losses if the certainty of competitive retaliation becomes a reality. Any tendency to increase prices or to overprice for excess profits may cause a loss in sales as some customers shift their loyalties, unless the increases are caused by rising costs and all pharmacies react in a like manner. Under these conditions prices are somewhat sticky, rather stable in amount and uniform among pharmacies for identical products and comparable services.

The supply prices which a pharmacy is willing to accept for prescriptions must include all material, labor and overhead costs plus a fair profit and this rule must apply to every prescription. Exceptions to the rule will automatically suffer a loss of profit and perhaps a loss of some of the costs depending upon the degree of discounting.

Although certain intra- and inter-professional relations may require a relaxing of the above policy, the discounting of prescription prices for the purpose of attracting the pseudo-loyalty of special





splinter groups reduces professional functions to mere merchandising functions in the eyes of the group. It causes professional services to be rendered at a loss or to be reduced in quantity or quality, intimates that all prices are too high, establishes an environment for customer distrust and lack of confidence and reflects upon all pharmacies to the detriment of the profession from retail pharmacist to manufacturer.

The gross margin and sliding gross margin concepts are not desirable as bases for the pricing of prescriptions because they seek to establish charges for operative costs as a function of material costs rather than of the operations performed and expenses incurred.

A proper approach to prescription pricing is based upon the use of correct cost data in such a way that each prescription price includes all material costs, a standard or average charge for the cost of general expenses classed as overhead, direct labor costs and a professional profit.

Material costs should be the actual cost or a standard cost based upon the cost per unit times the number of units dispensed plus a charge for the container. Special deals and quantity discounts are offered for the benefit of the dealer and should not enter into the material-cost determination.

Overhead charges should include all costs of operating the department with the exception of direct labor costs for professional functions. A fixed charge should reflect these costs on an efficient, productive-hour basis per prescription. Intelligent control of these cost items may mean the difference between full profit or near loss when competition sets prices lower than those profitable for the inefficient operator.

Direct labor charges will vary as the time required to fill the individual prescription varies. As the ratio of compounded-to-total-prescriptions decreases, the direct labor costs will tend to be reduced to a fixed charge which will reflect only that time necessary to dispense a specialty product. It is suggested that the minimum charge be based on the salary cost of five minutes at a rate of $4.20 per hour, or 35¢. A more realistic charge for modern day practice would approximate a minimum of 50¢.

A flat-rate net profit addition to every prescription is undesirable because it does not consider the differentials which net profit is normally expected to reflect. A fixed percentage net profit is acceptable and desirable because it permits the profit return to reflect differentials for every cost factor involved which may be changed from time to time. *It is through the fixed percentage application to all costs that a professional fee can be developed and successfully used.*

Elaborate calculations combined with professional judgment might properly enter into the establishment of a price policy. It is hardly sensible to create a new policy by treating each prescription as an unique event. In some instances the pricing function may require more time than dispensing because of intricacies of certain cost levels, numbers of units dispensed, sliding markups by cost ranges and other absurd details. Rationality leads to routine pricing technics and the simplest routine lies in the cost-pricing method which provides price in a matter of seconds when the general format has been established.

A professional fee is a charge for services rendered and as such includes both the costs of the services and a profit on them. As previously explained, a professional fee of $1.50 does not represent a net profit of $1.50. It represents professional service charges of 90 cents and a profit of 60 cents (40 percent); or it also might represent charges of $1 or 75 cents and profits of 50 cents (33 percent) or 75 cents (50 percent). The use of a professional-fee policy is most desirable because the pharmacist may set the fee profit at one rate and then use a different rate on the material costs. Thus a 20, 30, or 40 percent profit on materials may be coupled with a 20, 33, 40 or 50 percent profit on services for a definite profit-control policy. A professional fee also omits the need for individual labor-charge determinations, because it can be set to absorb greater-than-average labor costs. Such a policy also establishes a minimum price as the amount of the professional fee when material costs are negligible. An analysis of published reports and a consideration of a return commensurate with the investment, turnover and risk involved suggest that professional net profits should be between 11.1 and 25 percent of all costs, or between 10 and 20 percent of sales.

From planned, controlled prescription pricing based on sound, economic principles which prevail in the retail drug business, it is possible to develop a simple pricing policy which can be applied to all prescriptions and requires neither higher mathematics nor plastic crib sheets. The necessary requirements are

- **a knowledge of operating costs relative to professional services and available from a competent accountant or a decent set of records;**
- **a policy on full and odd-lot cost prices for all materials with unit costs clearly indicated on each shelf bottle or carton;**
- **a planned net profit which rewards the business for risk, investment, professional competence and efficient service.**

Price stability is a characteristic of pharmaceutical products and services. Uniformity of price between and among several outlets will occur only when an efficient price level has been attained in any given market or when groups of pharmacists attempt to establish uniformity through voluntary co-operation or through some form of competitive or professional pressure.

Cost-pricing technics are not new to pharmacy. At least one method is available; however, no single pricing chart will reflect the economic conditions which exist in 53,000 pharmacies or in the several market areas of the United States over an extensive period of time in a dynamic economy. Although cost-pricing technics are desirable and fair to all concerned, some pharmacies may be forced to meet the efficient prices of ethical competitors even though a loss is incurred until costs are controlled or volume is increased through effective promotion to provide a profit. Such marginal outlets will survive only as long as professional losses can be absorbed by general merchandise gains.

If costs are known, the answer is simple—

(1) all costs + a fixed percentage professional profit = selling price

(2) material cost + net profit + professional fee = selling price

Society offers to each pharmacy the opportunity to serve and to succeed; it does not guarantee success to those who refuse to provide competent, efficient service at prices determined on the basis of the costs of that service. ■

Robins

NOVEMBER CHECK LIST

Tear out for a handy check of
your current stock of these
Robins products that are receiving
special promotion in your area
THIS MONTH

NaClex® NEW antihypertensive-diuretic
☐ Tab. 100's ☐ Tab. 500's

Dimetane® Expectorant
☐ 16 oz. ☐ Gal.

Dimetane® Expectorant-DC
☐ 16 oz. ☐ Gal.

Phenaphen®
☐ Cap. 100's ☐ Cap. 500's ☐ Cap. 1000's

Phenaphen® with Codeine
☐ Cap. ¼ gr. 100's ☐ Cap. ¼ gr. 500's
☐ Cap. ½ gr. 100's ☐ Cap. ½ gr. 500's
☐ Cap. 1 gr. 100's ☐ Cap. 1 gr. 500's

Allbee® with C
☐ Cap. 100's ☐ Cap. 500's ☐ Cap. 1000's

Adabee®
☐ Tab. 100's ☐ Tab. 500's

Adabee®-M
☐ Tab. 100's ☐ Tab. 500's

Why not check your stock of
all Robins products at the same time
—and be prepared

A. H. ROBINS CO., INC., RICHMOND 20, VA.

APhA Women's Auxiliary

by Thea Gesoalde

what's in a membership

Over the past years under the spirited guidance of past administrations our auxiliary has grown and prospered, for this we are thankful in this month of general Thanksgiving. Our prayer is now for the future.

What's in a membership?

Everything!

The whole existence of any worthwhile organization! We wish to grow—to encompass all women in pharmacy. Women who will work and enjoy their husbands' profession.

A writer gets an "unreal" feeling tapping a message to an unseen audience. For one really doesn't know if it is read by women (I hope) . . or men . . or not read at all!

I hope someone is reading it.

There are 110,000 pharmacists in the U.S.A. and 18,000 are members of APhA. Why then are only 960 of their womenfolk members of our auxiliary? I'm sure that if they knew about the auxiliary and the work it does and how much closer its workings will bring them to their husbands' profession (without meddling!), they would all join!

So how about it—gentlemen—if you are the ones reading this—fill in the form at the bottom of the page and send with a check (the dues are only $2 a year and a life membership only $25) to our very hard-working membership chairman, Mrs. Elmer Plein, 5122 East 75th St., Seattle, Washington.

Now if this column is being read by a pharmacist, who is not a member of APhA but who is truly interested in pharmacy, he should know that "in unity there is strength." Why not join APhA and enlist your wife in the auxiliary?

Your profession needs you and the auxiliary needs your wife and/or daughter! Don't allow only a small percentage to carry on the work that needs united, total effort.

It's simple to sit back and "let Joe do it" and then when the chips are down to second-guess all the things that should have been done and weren't. Why not get into the swim yourself and help with your intellect, your efforts and your finances to make pharmacy an even more highly respected profession.

This state can only be achieved if all of pharmacy unites, each individual pharmacist and his mate willing and working toward that goal.

Women behind the scenes in pharmacy join with us. Give a little of yourself by helping us help our husbands and fathers.

application for membership
in women's auxiliary

Miss
Name Mrs. _____

Address _____
street

_____
city state

Give full name of APhA member in your family

_____

Dues enclosed $_____ Date_____

Pharmacy Today

Student Branches

Auburn University—Informality was the keynote of the first meeting of the Auburn University student branch. Faculty advisor, Dr. Myron B. Williams, outlined the advantages of membership in APhA and students met the entire faculty during refreshment time.

Duquesne University—A gala fall carnival was staged for the benefit of the Duquesne University student branch of APhA. Phi Delta Chi and Lambda Sigma donated time and money to make the production a success. At the October meeting of the branch students reported on all aspects of tranquilizers. The September meeting featured a report on APhA's annual meeting by Garrett Swenson, chairman of APhA's student section.

Ferris Institute—Milton J. Kelly, professor of pharmacy law, outlined "Pharmacies Professional Standing" for members of the Ferris Institute student branch at a September meeting.

New England College of Pharmacy—Diligence is a basic ingredient of a successful pharmacist, according to William Shea, president of the Massachusetts State Pharmaceutical Association. Listeners to his speech on the "Practical Application to Pharmacy" were members of the New England College of Pharmacy student branch at their October meeting.

Oregon State College—"Newness" was the theme of the September meeting of the Oregon State College student branch of APhA. Speakers discussed the school of pharmacy's new wing, new curriculum, new catalog and new alumni association. Dr. Rob McCutcheon reported on the APhA national convention.

South Dakota State College—A picnic welcoming freshman pharmaceutical students to South Dakota State College served as an opening for student branches to recruit new members for APhA. A special table was set up to register new members.

University of Colorado—A coffee get-acquainted hour followed the September meeting of University of Colorado student branch. Claude Mayer gave a first-hand report of the APhA convention in Washington and Bill Honeyfield, president, appointed a program committee for the year.

The City of Washington Branch of APhA recently established annual student awards at two schools of pharmacy. The students will be given the awards upon completing their junior year. Shown above (left to right) are Dean Chauncey I. Cooper accepting the check for Howard University college of pharmacy from R. David Allen, president of the City of Washington branch, and Dean Charles W. Bliven receiving the check for George Washington University from Kenneth E. Hanson, secretary.

University of Maryland—Practicing pharmacists should belong to and support their state pharmaceutical associations, Joseph Cohen, executive secretary of the Maryland Pharmaceutical Association, told members of the APhA student branch in September.

University of New Mexico—Elected to office posts at the University of Mexico for the current academic year are George Downs, president; John Lee, vice president; Kenneth Bindel, secretary, and John Tomasi, treasurer.

University of Washington—Substitution of drugs, generic and therapeutic equivalents and counterfeiting were discussed by William E. Powers, secretary of the National Pharmaceutical Council, at a September meeting of the University of Washington APhA student branch.

University of Wisconsin—"The Public Health Aspects of Mail-Order Prescriptions" was the topic on which W. Allen Daniels, executive secretary of the Wisconsin Pharmaceutical Association, spoke at the University of Wisconsin Pharmaceutical Society, APhA student branch, in October.

University of Wyoming—Officers for 1960–61 for the student APhA branch at the University of Wyoming include Ray Brush as president, Gerold Jenson, vice president, Mary Talovich, secretary, Betty Lou Armstrong, treasurer, and Joan Kosmicke, historian and reporter.

Washington State University—Ron Swanson, APhA student branch president, appointed committees to work on the pharmacy week window display and Dad's Day at the September meeting. Dr. Haakon Bang also discussed membership in APhA.

Local Branches

Chicago—James Rubin and Royal S. Dudley presented opposing views on the subject of how to beat price cutters at the October meeting of the Chicago branch of APhA. Frank Noto acted as moderator and channeled questions.

Indianapolis—A panel discussion on the problems in the prescription department, committee reports and an outline of programs to come highlighted the meeting of the Indianapolis branch of APhA on September 29. Slated for November is a pharmacology demonstration at the Pitman-Moore research laboratories in Zionsville and a discussion of the role of the sales representative in drug distribution by G.A. Oppenheimer of Parke, Davis Company.

New York—"Hospital Pharmacy Practice, Fact and Fallacy" was the topic of a panel discussion sponsored by the New York APhA branch and the Southeastern New York section of American Society of Hospital Pharmacists in October. Robert Bogash, Kenneth Griswold and Newell Stewart were the panel members.

Northern California—A joint meeting with the California Podiatry Association was held by the Northern California branch of APhA in October. Carel E.H. Mulder, chief of medical services for the state social welfare department, discussed generic prescribing for the medical care program at the September meeting.

Associations

American Council on Pharmaceutical Education—A survey of eight midwestern colleges will be made by the American Council on Pharmaceutical Education to determine methods of sharing expensive equipment, sharing outstanding teachers and research workers and avoiding duplication in specialized areas. The pharmacy colleges participating in the study are the universities of Illinois, Michigan, Minnesota, Wisconsin, Chicago, Ohio State, Purdue and Iowa.

American Heart Association—St. Louis was the scene of the 33rd scientific sessions of the American Heart Association in October. New drugs in the treatment of hypertension and clinical reports on surgically and medically treated hypertensive patients were discussed in fireside conferences at the meeting.

California Pharmaceutical Association—National honors for the California Pharmaceutical Association were won by Kenneth C. Young, secretary of the Pharmaceutical Institute of California, when he entered the "ideas" display contest of the American Society of Association Executives. His display on the association's financial campaign for a new state headquarter's building took second prize.

New Jersey Society of Hospital Pharmacists—Looking into the crystal ball for the New Jersey Society of Hospital Pharmacists in September was Dr. George F. Archambault, APhA Council chairman. The pharmacy consultant to the surgeon general of the U.S. Public Health Service spoke on "The Pharmacy of Tomorrow in the United States" at the group's banquet.

Wisconsin Pharmaceutical Association—Named Wisconsin Pharmacist of the Year was Dean Arthur H. Uhl of the school of pharmacy of the University of Wisconsin. The award, given for the first time by the Wisconsin Pharmaceutical Association, was presented to Dean Uhl at the group's 80th annual meeting October 2–4. Speakers at the meeting included Dr. William S. Apple, APhA secretary, Austin Smith, president of the Pharmaceutical Manufacturers Association, and Philip F. Jehle, Washington representative of the National Association of Retail Druggists.

Colleges

Fordham University—The class of 1925 staged a 35th anniversary dinner in October for the benefit of Fordham's student fund. Fordham graduate, Alfred T. Zodda, vice president of Olin Mathieson Chemical Corporation, spoke on "Pharmacy's Challenge of Tomorrow" at the event which honored faculty members.

Lunsford Richardson Pharmacy Awards—Pharmaceutical students with an editorial and research bent are eligible for prizes totaling nearly $10,000. The Lunsford Richardson Pharmacy Award program for 1961 was officially launched October 10. Sponsored and administered by the Vick Chemical Company, William S. Merrell Company, National Drug Company and Walker Laboratories, Inc., the awards are offered to graduate students for papers on original research or theses, to under graduates for manuscripts on "Informing the Public about Drugs" or the "Professional Society—What It Means to Pharmacy and to Me." Closing date for the 1961 program is March 1.

New England College of Pharmacy—Gaveling meetings of the Gamma Lambda chapter of Kappa Psi is William E. Bennion, new regent. John J. Merianos, vice regent, David MacFarlane, secretary, and Paul T. Farrell, treasurer, will also serve for the coming academic year.

University of Buffalo—Omega chapter of Rho Chi elected Louis Trachtman president for the coming year. Other officers are August D'Alessandro, vice president, James Donsbach, secretary-treasurer, and Joseph Rutowski, historian.

University of California—Dr. Eugene C. Jorgensen, associate professor of chemistry and pharmaceutical chemistry, and Dr. John C. Craig, professor of pharmaceutical chemistry, school of pharmacy University of California, have been authorized to do research work by governmental offices. Dr. Jorgensen received a grant from the National Institutes of Health and Dr. Craig was awarded a research contract by the department of the Army, office of the surgeon general.

University of Illinois—The fifth series of lectures on modern pharmacy, sponsored by the University of Illinois college of pharmacy, is scheduled for November 9 and 10 at the Allerton estate near Monticello, Illinois. Covering subjects from the newest happenings in cancer research to international control of narcotic drugs to marketing of drugs, the lectures will feature such speakers as Louis G. Busse, associate dean of the University of Wisconsin school of pharmacy, John P. Meyer, Illinois state senator, and David B. Stiles, director of market development at Abbott Laboratories. Other speakers will be from the faculty of the University of Illinois. Dean George L. Webster is handling registrations.

University of Kansas City—Diamond jubilee celebration speakers at the University of Kansas City in October included Dr. Chauncey D. Leake, president of the American Association for the Advancement of Science and Ohio State University pharmacy professor and a group of four pan-

Heading the Nevada State Pharmaceutical Association for 1960–61 are (left to right, below) H.S. Bladgett, president; F. Ted Lemons, vice president; Mildred R. Smith, assistant secretary; Peter Codner, secretary; John P. Cannan, treasurer, and (not shown) Melvin Griffiths, vice president.

BEHIND THE IRON CURTAIN

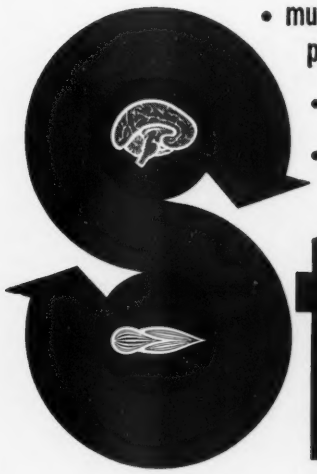
Ever wonder what happens to gift parcels of western "brand" drugs sent to families behind the Iron Curtain? Well, as reported from one of the satellite countries, if the recipient wishes to use it, he can. If not, the government buys the drugs . . . supposedly as a gesture of good will to the family. ■ But actually, the western brands are bought and resold through stores to government leaders and others who can afford the price. They are sold even though the government manufactures a generic product of each type for **free** distribution. ■ Strange? Or not so strange. When it comes to a matter of life, health and disability, **trust** becomes a critical factor to anyone, anywhere – trust in the knowledge of the physician . . . trust in a known drug. And apparently even in the "land of generics" more trust is placed in the brand name system of a free economy. They acknowledge what we hold to be fundamental: **In order to exist, the brand name manufacturer must do his job better...select raw materials with greater care...exercise greater control in compounding and testing...meet more than average or acceptable specifications...know more about possible pitfalls of production through original research.** ■ These are the factors built into a reputable brand name . . . ultimately the only assurance to physician and patient of maximum drug performance.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

alert tranquillity

a new, improved, more potent relaxant for anxiety and tension

- effective in half the dosage required with meprobamate
- much less drowsiness than with meprobamate, phenothiazines, or the psychosedatives
- does not impair intellect, skilled performance, or normal behavior
- neither depression nor significant toxicity has been reported



alert tranquillity

Striatran®

EMYLCAMATE

- a familiar spectrum of antianxiety and muscle-relaxant activity
- no new or unusual effects—such as ataxia or excessive weight gain
- may be used in full therapeutic dosage even in geriatric or debilitated patients
- no cumulative effect
- simple, uncomplicated dosage, providing a wide margin of safety for office use

STRIATRAN is indicated in anxiety and tension, occurring alone or in association with a variety of clinical conditions.

Adult Dosage: One tablet three times daily, preferably just before meals. In insomnia due to emotional tension, an additional tablet at bedtime usually affords sufficient relaxation to permit natural sleep.

Supply: 200 mg. tablets, coated pink, bottles of 100.

While no absolute contraindications have been found for Striatran in full recommended dosage, the usual precautions and observations for new drugs are advised.

STRIATRAN will be promoted by intensive detailing, mailings, and journal advertising. Order an adequate supply now.

MSD MERCK SHARP & DOHME, DIVISION OF MERCK & CO., INC., WEST POINT, PA.

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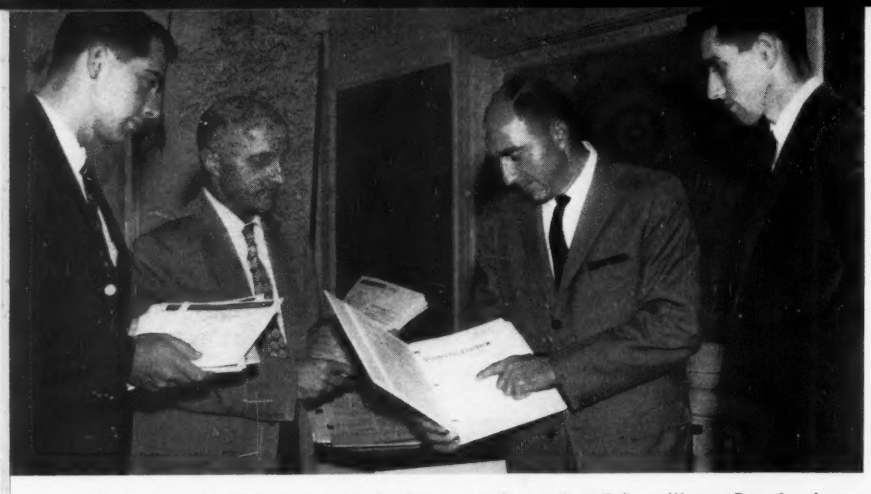


To each member of the senior class in pharmacy at Oregon State College, Western Drug Supply presented a year's subscription to *pharmIndex*, semi-monthly publication of professional product information. Pictured above (left to right) are Ralph Meyers, pharmacy student, and Dr. Leo Sciuchetti, professor of pharmacognosy, watching as George Matranga, division manager of Western Drug Supply, shows John D. Leary, assistant professor of pharmacognosy, how *pharmIndex* can be used.

Dean Leslie L. Eisenbrandt University of Kansas City school of pharmacy

elists. Dr. William Apple, APhA secretary, Charles R. Beall, McKesson and Robbins company; Dr. George Webster, dean of the University of Illinois school of pharmacy, and John Bowles, Rexall Drug company participated in the panel discussion.

University of Rhode Island—A two-day pharmacy clinic at the University on November 15 and 16 will be climaxed by a banquet at which Congressman John E. Fogarty of Rhode Island will speak.

Sponsored by the University, Rhode Island Traveling Men's Auxiliary and the Rhode Island Pharmaceutical Association, the clinic will feature new drug information and current problems associated with pharmacy.

University of Southern California—A graduate seminar sponsored by the University of Southern California school of pharmacy on "Various Aspects of Medicinal Agents Derived from Natural Products" is open to the public. Under the direction of Dr. Glenn H. Hamor, the seminar sessions are being held every week through December 1. The lectures began September 29.

University of Texas—Drs. Jaime N. Delgado and Robert G. Brown brought pharmacists and physicians up-to-date on new concepts in oral therapy at the final class in a series of four designed by the UT pharmacy extension service. As an added feature, Dr. Wallace L. Guess conducted a review of prescription procedures which clarified the responsibilities of the physician and the pharmacist in handling prescriptions.

University of Wisconsin—Applications for registration at the third annual National Industrial Pharmaceutical Research Conference are now available from Richard S. Strommen, Extension Services in Pharmacy, 301 Chemistry Building, University of Wisconsin, Madison. Cost of registration and accommodations is $95. Attendance at the conference, which will be held June 4 to 7 at Land O'Lakes, Wisconsin, is limited.

PHARMACY *the world over*

offers opportunities to young men and women completing baccalaureate courses of study in Pharmacy at this institution, oldest yet most modern of its kind in the Americas, for interesting and successful careers in pharmaceutical practice, research and industry. Applications now considered after 3½ years of high school, acceptance dependent upon later graduation. M.Sc. and Ph.D. degree courses. Also Schools of Chemistry, Bacteriology and Biology. Residence hall for women students. Write for free catalog.

Philadelphia College
OF PHARMACY AND SCIENCE

Government

Air Force—Pharmacy students entered in the Air Force ROTC program can expect to serve four years of active duty instead of three if they enter advanced training after January 1, 1961. The new ruling which applies to all non-flying officers has been issued to stabilize the turnover and increase the proficiency of the air force as well as the officers.

Industry

Abbott Laboratories—A new member of Abbott Laboratories hierarchy is Edward R. Luter, vice president and treasurer. He was formerly manager of foreign finance and taxation for Sears, Roebuck and Company.

William G. Davis (right)

Dr. Raymond M. Rice (left)

Eli Lilly—Executive shifts at Eli Lilly and Company have moved Dr. Raymond M. Rice from executive director of medical research to vice-president of medical affairs on a world wide basis. Dr. Kenneth G. Kohlstaedt moves into Dr. Rice's former position, and Dr. Bill L. Martz succeeds Dr. Kohlstaedt as director of clinical research. General Counsel William G. Davis also was elected secretary of the company.

Merck Sharp and Dohme—New manager of biological development for Merck Sharp and Dohme is Dr. Alan Gray, formerly chief of virology for Microbiological Associates.

Sterling Drug—A newly created post of vice chairman of the research board at Sterling Drug, Inc. will be filled by Dr. Maurice L. Tainter, vice-president of the firm. Succeeding Dr. Tainter as director of the Sterling-Winthrop Research Institute is Dr. C.M. Suter, former associate director.

Pharmacists

Madeline O. Holland—Ending more than two decades of editorial activity, Dr. Madeline Oxford Holland announced her resignation as editor of the *American Professional Pharmacist*, effective December 30, 1960. A graduate of the Philadelphia College of Pharmacy and Science, Dr. Holland has included practicing pharmacy in Philadelphia, teaching at PCPS and serving as faculty advisor for women students in her career.

Irving Rubin—Former managing editor on pharmacy of *American Druggist*, Irving Rubin is the new editor of the *American Professional Pharmacist*. A graduate of Brooklyn College of Pharmacy, he brings to his post a background in retail and hospital pharmacy as well as 22 years of pharmaceutical journalism.

Dependable
Pain Reliever

Professional confidence in the uniformity, potency and purity of Bayer Aspirin is evidenced by ever increasing recommendation. Bayer Aspirin is the most widely accepted brand of analgesic the world has ever known.

We welcome your requests for samples of Bayer Aspirin and Flavored Bayer Aspirin for Children.

THE BAYER COMPANY, DIVISION OF STERLING DRUG INC., 1450 BROADWAY, NEW YORK 18, N.Y.

APhA Handy

Drug Reference

For easy reference—a listing of Journal pages for HDR by month.—June: 374–394; July, 445–457; August, 518–532; September, 596–608; October, 674–683, November, 740–748.

An all-inclusive, cumulative, six-month alphabetical listing of new drugs and dosage forms, changes in available dosage forms and clinical test results of newer drugs. *Notations:* NND—abstracts of descriptions of new and nonofficial drugs by AMA Council on Drugs. Dosage—adult unless otherwise indicated. Clinical (clin.)—investigational drug not available commercially. O-t-c—salable over-the-counter (without prescription), ℞—prescription required. *Abbreviations:* amp. (ampul), b.i.d. (twice a day), cap. (capsule), combn. (combination), equiv. (equivalent), i.m. (intramuscular or -ly), i.v. (intravenous or -ly), inj. (injection), liq. (liquid), lot. (lotion), oint. (ointment), ophth. (ophthalmic), prepn. (preparation), q. (every), q.i.d. (four times a day), s.c. (subcutaneous or -ly), soln. (solution), suppos. (suppository or -ies), susp. (suspension), syr. (syrup), tab. (tablet), tbsp. (tablespoon or -ful), tsp. (teaspoon or -ful), t.i.d. (three times a day).

Acetaminophen, see combns. in Coplexen liq., p. 742; in Coryz tabs., p. 676; in Depralon forte tabs., p. 380; in Hycomine comp. tabs., p. 744; in Thorphan C.F. tabs., p. 683.

N-Acetyl-*p*-aminophenol, see acetaminophen.

N′-Acetyl sulfamethoxypyridazine, see Kynex acetyl drops, p. 525.

Adabee and **Adabee-M** tabs., p. 518.

Akalon-T caps., p. 445.

Algic tabs., p. 596.

Alkam (First Texas) is dihydroxyaluminum aminoacetate.

Allantoin, see combns. in Domerine medicated shampoo, p. 380; in Sebical shampoo, p. 455; in VAD sofcream, p. 683; in VAD and VAD w/neomycin creams, p. 683.

Allergan soaking and wetting solns., p. 518.

Alpen tabs. and for oral soln., p. 374.

Alpha-phenoxyethyl penicillin potassium, see potassium phenethicillin.

***dl*-Alpha tocopherol,** see vitamin E, p. 394.

***dl*-Alpha tocopheryl acetate,** see vitamin E, p. 394.

Alumina powder, hydrated, see combn. in Polymagma tabs., p. 606.

Aluminum and magnesium hydroxides w/magnesium trisilicate and calcium carbonate, see Margel susp. and tabs., p. 451.

Aluminum hydroxide gel, see combn. in Kathmajel tabs., p. 451.

Aluminum nicotinate, see Nicalex tabs., p. 452.

Alvodine ethanesulfonate Ampuls and Tablets (Winthrop). Per 1 cc. of amp.

soln.: 20 mg.; and per tab. (scored): 50 mg. of piminodine ethanesulfonate; chemically ethyl-4-phenyl-1-3-(phenylamino)propyl piperidine-4-carboxylate ethanesulfonate. A narcotic analgesic as potent as morphine, it causes euphoria in less than 1% and drowsiness in less than 7% of patients and does not constipate. Indicated for preoperative preparation; for relief of postoperative pain and conditions such as myocardial infarction, intractable angina, cholecystitis, pleurisy, pain of advanced carcinoma (may be given orally); and as supplemental anesthetic. *Dosage:* Oral, 25–50 mg. q. 4–6 hrs., nonambulant patients may receive up to 100-mg. dose. S.c. or i.m., 10–20 mg. q. 4 hrs. as needed; may be given with atropine for renal or biliary colic. I.v.—Have narcotic antagonists levallorphan tartrate (Lorfan) or nalorphine HCl (Nalline HCl) and oxygen equipment available. Dilute only with water or 5% dextrose, 1 cc. of soln. may be mixed with 19 cc. of diluent (dilution, 1 mg./cc.). As anesthetic supplement give slowly 2 cc. of dilution and repeat at about 2-min. intervals; a total of 4–6 cc. usually gives analgesic effect; additional doses of 2 cc. should be given as needed. May be habit forming. Overdosage can cause serious impairment of respiration. Use cautiously in elderly or very young, to avoid exaggerated respiratory or circulatory response, and in patients with intracranial lesions, in shock or bleeding severely. Consider possible additive effect of tranquilizers, muscle relaxants or barbiturates on respiration and circulation. Ampuls, 1 cc., in boxes of 25 and 100; tabs. in bottles of 100 and 500. Narcotic blank required. ℞.

Aminoacetic acid, see combn. in Lycol elix., p. 383.

9-Aminoacridine HCl, see combn. in Aquacort Supprettes, p. 596.

Aminophylline, see combn. in Res-o-phyllin caps., p. 390.

Amitriptyline, clin., p. 674.

Amodiaquin HCl, see combn. in Camoprim tabs. and Infatabs, p. 676.

***d*-Amphetamine, carboxymethylcellulose salt,** as Carboxyphen in Bontril timed tabs., p. 520.

***d*-Amphetamine sulfate,** see combns. in Gevrestin caps., p. 450; in Tymafast caps., p. 456.

Amphotericin B, see combn. in Mysteclin-F caps., p. 679.

Anasorb tabs. (Marion) now contain 50 mg. sorbitol (was 300 mg.) per tab. Each tab. still contains 0.5 mg. folic acid. Bottles: 100, 500, 1000. ℞.

Android tabs., p. 374.

Andro-Wolfia tabs., p. 376.

Anhydrohydroxyprogesterone, see Progestroid tabs., p. 388.

Antacid combn. w/vits., see Ulcetrol tabs., p. 531.

Anti-dose powder, p. 445.

Antrenyl bromide inj., p. 445.

Anturan (Geigy), see sulfinpyrazone NND, p. 746.

APC mixture, see combn. in Darbacin caps., p. 449; in Fiorinal caps., p. 743.

Aquacort Supprettes, p. 596.

Aqua Mephyton injection, p. 596.

Arterodyl TT tabs., p. 520.

Ascorbic acid, see combns. in Corizahist tabs., p. 448; in Dactil-OB tabs., p. 676; in Thorphan C.F. tabs., p. 683; in Tymafast caps., p. 456; in Vitron-C tabs., p. 532.

Aspirin, see combns. in Equagesic tabs., p. 524; in Panac tabs., p. 386; in Robaxisal tabs., p. 390; in Robaxisal P-H tabs., p. 682; in Synirin tabs., p. 456; in Trancoprin tabs., p. 531.

Aspred-C tabs., p. 376.

Atropine sulfate, see combn. in Isopto Mydrapred susp., p. 451.

Attapulgite, activated, see combn. in Polymagma tabs., p. 606.

Becotin-T tabs., p. 520.

Beldase caps., p. 448.

Bellabil tabs., p. 376.

Belladonna alkaloids, see combns. in Beldase caps., p. 448; in Bellabil tabs., p. 376; in Donnagel-PG susp., p. 449; in Masodonna tabs., p. 451.

Benactyzine, see combn. in Deprol tabs., p. 379.

Benzoyl peroxide, see combns. in Hydroquin comp. oint., p. 383; in Quinolor comp. oint., p. 390.

Benzphetamine HCl, see Didex tabs., p. 380.

Benzydroflumethiazide, see combn. in Rautrax-N tabs., p. 530.

Bis-tropamide, see Mydriacyl ophth. soln., p. 316.

Bithionol, see combn. in Domerine medicated shampoo, p. 380.

Bontril timed tabs., p. 520.

Boric acid, see combn. in Optophed soln., p. 528.

Brevital sodium for injection, p. 598.

Bronkotab elix., p. 520.

Bubartal TT tabs., p. 520.

Butabarbital, see combn. in Bontril timed tabs., p. 520.

Butabarbital sodium, see Bubartal TT tabs., p. 520; combn. in Res-o-phyllin caps., p. 390.

Caffeine, see combn. in Hycomine comp. tabs., p. 744.

Calcium acetylsalicylate carbamide, see combn. in Tain inlay-tabs., p. 747.

Calcium carbonate, see combn. in Medalac tabs., p. 384.

Calcium pantothenate, see combn. in Panac tabs., p. 386.

Calcium undecylenate, see Caldesene oint. and powd., p. 741.

Caldesene Ointment and Powder (Maltbie) contains calcium undecylenate 15% in a water-washable oint. base or neutralized talc base, respectively. For relief of sore, burning, itching skin in diaper rash, chafing, etc. *Application:* Oint. or powd., gently to cleansed area. Oint. in 1½-oz. tubes; powd. in 2-oz. shaker containers. O-t-c.

Camoprim tabs., p. 676.

Capre tabs., p. 376, now contain no folic acid. O-t-c.

Carbacel, BufOpto ophth. soln., p. 598.

Carbachol, see Carbacel BufOpto ophth. soln., p. 598.

Carbetapentane tannate, see combn. in Rynatuss Tabules and susp., p. 682.

Carbocaine HCl sterile soln., p. 448.

Carbo-Dome creme and lot., p. 676.

Carboxymethylcellulose salt of *d*-amphetamine as Carboxyphen in Bontril timed tabs., p. 520.

Carboxyphen, see combn. in Bontril timed tabs., p. 520.

Carisoprodol, see Somacort tabs., p. 682.

Cary skin thermometer gives readings in 10–15 sec. and is useful in diagnosis of conditions of disturbed circulation or innervation of the extremeties or other superficial areas and for evaluation of treatment by, before and after skin temperatures. Available through hospital and surgical supply dealers or from Cary Thermometer Co., 100 W. 42nd St., New York, N.Y. Device.

Caytine (Lakeside), see Protokylol HCl NND, p. 606.

Cellase 1000 Powder (Wallerstein) is a cellulose-digesting enzyme isolated from a strain of *Aspergillus niger* which depolymerizes cellulosic polysaccharides into smaller fragments. Suggested for use in geriatric digestive disorders. Facilitates digestion of cucumbers, cabbage, and other roughage foods. Supplied to formulators of dosage forms.

Cellulase, see combn. in Kanulase tabs., p. 383.

Charcoal, activated, see combn. in Beldase caps., p. 448.

Charcoal, activated, w/MgO and tannic acid, see Anti-dose powd., p. 445.

Chlophedianol HCl, see ULO syr., p. 741.

Chlorcyclizine HCl, see Perazil tabs., p. 454.

Chlorhydroxyquinoline, see combns. in Hydroquin comp. oint., p. 383; in Quinolor comp. oint., p. 390.

Chlormezanone, see combn. in Trancoprin tabs., p. 531.

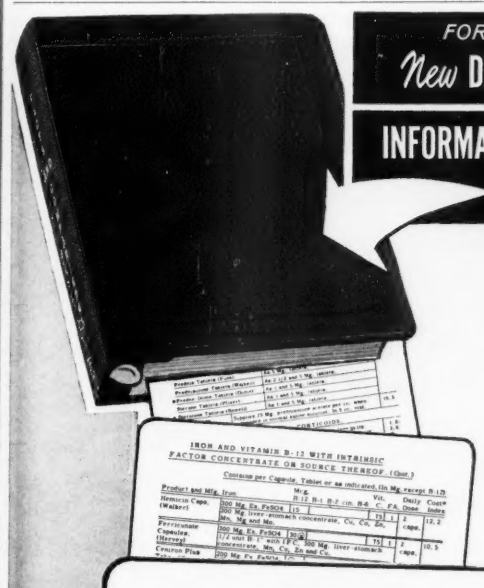
Chloroxylenol, see Septiderm and —HC creams, p. 530.

Chlorpheniramine maleate, see Tymahist caps., p. 456; see combns. in Algic tabs., p. 596; in Bronkotab elix., p. 512; in Covanamine expectorant, p. 742; in Covanamine liq., p. 522; in Esteril tabs., p. 449; in Hycomine comp. tabs., p. 744; in Propamine caps. and syr., p. 455; in Thorphan C.F. tabs., p. 683.

Chlorpheniramine tannate, see combn. in Rynatuss Tabules and susp., p. 682.

Chlorthalidone, see Hygroton tabs., p. 450.

Choloxin (Baxter), sodium D-thyroxine, gave favorable results in lowering blood cholesterol in 31 patients, reported Dr. B.M. Cohen in *Clin. Med.*, **7**, 1781 (Sept. 1960). Side effects noted with the natural isomer, sodium L-thyroxine, were not encountered. The drug is not available for general medical use. Clin.



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Chromelin soln. for tanning, p. 520.
Chymolase inj., p. 448.
Chymoral tabs., p. 379.
Chymotest inj., p. 448.
Chymotrypsin see Chymolase inj., p. 448; Chymoral tabs., p. 379; Enzeon aq. inj., p. 449.
Chymotrypsin w/gelatin, see Chymotest inj., p. 448.

Clysmathane Rectal Solution, half strength (Fleet) is now available in single dose units containing 312.5 mg. theophylline monoethanolamine in 37 cc. of aq. soln.

Coal tar extract, see combn. in Sebical shampoo, p. 455.
Coal tar soln., see Carbo-Dome creme and lot., p. 520.
ColBenemid tabs., p. 522.
Colchicine, see combns. in ColBenemid tabs., p. 522.
Compligen vaccine, p. 522.

Coplexen Liquid (S.K.&F.). Per 5 cc. (red, fruit): trimeprazine as tartrate 2 mg., acetaminophen 120 mg., phenylpropanolamine HCl 10 mg. For pediatric use to control symptoms of the cold complex. Because trimeprazine is a phenothiazine derivative, watch patient for possible agranulocytosis. Paradoxical stimulation with accompanying muscle incoordination has been noted, but rarely. Any side effects disappear when medication is stopped. *Dosage:* Every 4–6 hrs. if needed. Children 10–24 lb. $^1/_2$ tsp., 25–74 lb. 1 tsp., 75 lb. or more 1–2 tsps. Bedtime dose may be repeated, if needed, to induce sleep. Total 24-hr. dosage for the 3 wt. groups should not exceed 3, 6, and 9 tsps., respectively. Bottles: 12 oz. ℞.

Coricidin D Liquid (Schering) contains chlorpheniramine maleate, sodium salicylate, *d*-isoephedrine and caffeine. For relief from congestion. Bottle: 4 oz. O-t-c.

Corizahist tabs., p. 448.
Coryz tabs., p. 676.
Cosmedicake, p. 676.
Cotazym caps., p. 522.
Coumadin sodium tabs., p. 522.

Covanamine Expectorant (VanPelt & Brown). Per 5 cc.: phenylephrine HCl 3.75 mg., phenylpropanolamine HCl 6.25 mg., chlorpheniramine maleate 1 mg., pyrilamine maleate 6.25 mg., glyceryl guaiacolate 100 mg. For relief of cough and congestion, particularly in upper respiratory tract allergy. Precautions as for other Covanamine products. *Dosage:* Every 4 hrs.; 2 tsps.; children 6–12 yrs., 1 tsp.; 1–6 yrs., $^1/_2$ tsp.; under 1 yr., $^1/_4$ tsp. Bottles: pints, gals. O-t-c.

Covanamine liq., p. 522.
Cupertin cream, p. 676.
Cyclex tabs., p. 522.
Cytomel tabs., p. 379.
Dactil-OB tabs., p. 676.
Darbacin caps., p. 449.
Darcil tabs., p. 379.
Daricon (Pfizer), see oxyphencyclimine HCl NND, p. 680.

Darvon Compound-65 Pulvules (Lilly) (red/gray) contain in each the same amounts of the APC combn. as regular Darvon compound but contain 65 mg. *d*-propoxyphene HCl instead of 32 mg. *Dosage:* 1 Pulvule 3–4 times daily. Bottles: 100. ℞.

Dayteens Filmtab (Abbott). Red caps. containing a vitamin-mineral supplement with Ca and Fe. *Dosage:* 1 tab. daily. Bottles: 100, 250. O-t-c.

DBI, tabs., p. 598; see phenformin HCl NND, p. 680.

Deaner-100 Tablets (Riker). Per tab. (scored, pink): 100 mg. 2-dimethylaminoethanol (Deaner base) as the *p*-acetamidobenzoate. 25-mg. tabs. also available. ℞.

Deaner (Riker), see deanol acetamidobenzoate NND, p. 742.

Deanol acetamidobenzoate NND (Deaner); *p*-acetamidobenzoic acid salt of 2-dimethylaminoethanol. Deanol base is a tertiary amine which differs from choline only by the absence of one methyl group. Deanol passes the blood-brain barrier more readily than does choline. Deanol is proposed chiefly for the symptomatic relief of such vague complaints as chronic fatigue, neurasthenia and neurotic behavior, and for alleviation of behavior problems and learning difficulties in school-age children. Clinical experience to date indicates that deanol is a drug of relatively low toxicity, and no serious side effects have been noted with doses as large as 900 mg. daily. Occipital headache, constipation, muscle tenseness and spontaneous muscle twitching, insomnia, pruritus, postural hypotension, and weight loss have been reported in some patients. The relationship of these symptoms to the medication is uncertain, although they have been reported to disappear with decreased dosage. See *J. Am. Med. Assn.*, **172,** 1518 (Apr. 2, 1960).

Decadron, see Dexamethasone NND, p. 522.
Decadron elix., p. 598.
Decadron phosphate inj., p. 449.
Decadron phosphate op'th. soln., p. 522.
Decaspray aerosol, p. 522.
Declostatin caps., p. 676.
Dehydrocholic acid, see combn. in Bellabil tabs., p. 376.
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Delbenol caps. and emulsion, p. 379.
Deluteval 2X inj., p. 676.
Demethylchlortetracycline HCl, see combn. in Declostatin caps., p. 676.
Depo-Medrol, see methylprednisolone acetate NND, p. 384.
Depo-Medrol susp., p. 522.
Deprol tabs., p. 379.
Deronil, see dexamethasone NND, p. 522.
Desbutal tabs., p. 676.
Desenex aerosol, p. 449.
Desoxyribonuclease, see combn. in Elase for soln. and oint., p. 677.

Dexamethasone NND, p. 522.
Dexamethasone, see Decadron elix, p. 598; combns. in Decaspray aerosol, p. 522.
Dexamethasone 21-phosphate, see Decadron phosphate inj., p. 449.
Dexbrompheniramine maleate NND, p. 600; see combn. in Disophrin tabs., p. 524.
Dexchlorpheniramine maleate NND, p. 600.
Dextromethorphan HBr, see Pyraldine, p. 746; see combns. in Endotussin NN syr. and NN ped. syr., p. 600; in Thorphan C.F. tabs., p. 683.
Dianabol tabs., p. 380.
Dianeal w/dextrose soln., p. 677.
Diatrizoate sodium, see Hypaque sodium oral liq. and oral powd., p. 602.
Dichlorisone, see combns. in Diloderm and Neo-Diloderm topical forms, p. 522.
Didex tabs., p. 380.
Dienestrol, see combn. in Lucidon tabs., p. 526.
Diethylpropion, see Tenuate tabs., p. 456.
Dihydrocodeinone bitartrate, see combn. in Hycomine comp. tabs., p. 744.
Dihydrostreptomycin sulfate, see combn. in Polymagma tabs., p. 606.
Dihydroxyacetone, see Chromelin soln., p. 520.
Dihydroxyaluminum aminoacetate, see combn. in Pred-Kam tabs., p. 742.
Diloderm and Neo-Diloderm topical forms, p. 522.
2,6-Dimethoxyphenylpenicillin, see Staphcillin, p. 746.
Dimethypyrindene maleate, clin., p. 380.
3,5-Dimethyl-4-chlorophenol, see chloroxylenol.
Dioctyl potassium sulfosuccinate, see combn. in Rectalad miniature enema, p. 390.
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Dipralon forte tabs., p. 380.
Dipyrone, see combns. in Dipralon forte tabs., p. 380; in Fevonil liq., p. 382.
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Disophrin tabs., p. 524.
Domerine medicated shampoo, p. 380.
Donnagel-PG susp., p. 449.
Dorase (cellulase), see combn. in Kanulase tabs., p. 383.
Dornwal tabs., p. 312.
Dramcillin-S for oral liq., p. 380.

Elase soln. and oint., p. 677.
Elavil (Merck S&D), see amitriptyline, p. 674.
Electrolyte soln. for irrigation, see Tis-u-sol soln., p. 683.
Electrolytes, see Dianeal w/dextrose solns., p. 677.
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Enisyl w/iron pediatric tabs., p. 380.
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Ephedrine HCl, see combn. in Quakedrin tabs., p. 455.

Ephedrine sulfate, see combns. in Bronkotab. elix., p. 520; in Esteril tabs., p. 449.

Ephedrine tannate, see combn. in Rynatuss Tabules and susp., p. 682.

Equagesic tabs., p. 524.

Es-A-Cort lot., p. 677.

Esidrix (Ciba), see hydrochlorothiazide NND, p. 602.

Esidrix-K tabs., p. 600.

Esteril tabs., p. 449.

Estradiol valerate, see combn. in Deluteval 2X inj., p. 676.

Estrone, see combn. in Es-A-Cort lot., p. 677.

Estro-Serp tabs., p. 382.

Ethinyl estradiol, see combns. in Estro-Serp tabs., p. 382; in Gevrestin caps., p. 450; in Progestroid tabs., p. 388.

Ethoheptazine citrate, see combn. in Equagesic tabs., p. 524.

Ethoheptazine citrate NND (Zactane citrate); 1-methyl-4-carbethoxy-4-phenylhexamethylenimine citrate. A synthetic, non-narcotic analgesic of moderate potency, the drug has been used to control mild or moderate pain associated with musculoskeletal disorders, for neurological conditions, for the immediate postpartum and postoperative period, and for earlier stages of malignant diseases. Headache responds poorly and the drug is ineffective in severe pain. Occasional side effects include epigastric burning, nausea, vomiting, dizziness, and pruritus. See *J. Am. Med. Assn.*, **172,** 1518 (Apr. 2, 1960).

Ethylpapaverine HCl, see ethaverine HCl, p. 382.

Feosol Plus caps. (S.K.&F.) are now ℞ and conversion labels are supplied by SKF. The daily dosage of 3 caps. supplies 1.2 mg. folic acid in addition to Fe, liver, and vitamins.

Feraplex liquid and w/B_1 and B_{12}, p. 600.

Ferric ammonium citrate w/methoxylated polygalacturonic acids, see Ferromax inj., p. 450.

Ferromax inj., p. 450.

Ferronord prograva tabs., p. 450.

Ferrous betaine citrate w/B-complex vits., see combn. in Kelatrate syr., p. 383.

Ferrous fumarate, see Ircon tabs., p. 525; Pantrinsic tabs., p. 386; combns. in Storcavite tabs., p. 743; in Vitron-C tabs., p. 532.

Ferrous fumarate w/B_{12}, see combn. in Pantrinsic-C, p. 386.

Fevonil liq., p. 382.

Fibrinolysin (human), see Thrombolysin Lyovac for inj., p. 531; combn. in Elase for soln. and oint., p. 677.

Fiorinal Capsules (Sandoz). Per cap.: isobutylallylbarbituric acid (Sandoptal) 48 mg., aspirin 193 mg., phenacetin 130 mg., caffeine 43 mg. Ingredients and use same as tablets. *Dosage:* 1–2 caps. q. 4 hrs. up to 6 per day. Bottles: 100. ℞.

Flavocillin for oral soln., p. 450.

Fluphenazine di-HCl, see Permitil Chronotab tabs., p. 528; see Prolixin inj., p. 681.

Fluoride, see Karidium tabs., p. 451.

Fluorometholone NND, p. 382.

Fortelac-B Captabs, p. 450.

Fortelac-C Captabs, p. 450.

Gammacorten, see Dexamethasone NND, p. 522.

Gevrestin caps., p. 450.

Glucosamine, p. 450.

D-Glucosamine HCl, see glucosamine, p. 450.

Glutamic acid, see combn. in Android tabs., p. 374.

Glutamic acid HCl, see combn. in Kanulase tabs., p. 383.

Glycerin, see combn. in Rectalad miniature enema, p. 390.

Glyceryl guaiacolate, see combns. in Bronkotab elix., p. 520; in Coryz tabs., p. 676; in Covanamine expectorant, p. 742.

Glyceryl guaiacolsulfonate, see combn. in Res-o-phyllin caps., p. 390.

Glycine, see combn. in Medalac tabs., p. 384.

Grifulvin tabs. (McNeil) now also 500 mg. griseofulvin per tab.

Guanethidine sulfate, see Ismelin sulfate tabs., p. 602.

Hemoccult test kit, p. 450.

Heparin sodium inj., p. 382.

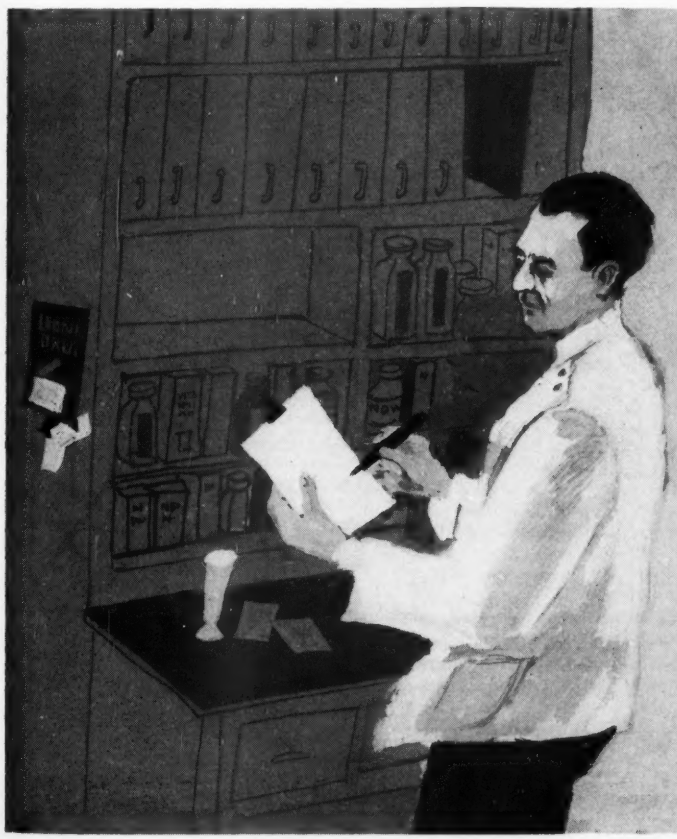
Hesperidin complex, see combn. in Dactil-OB tabs., p. 676.

Hexachlorophene, see combn. in Sebical shampoo, p. 455.

Homatropine HBr ophth. soln., see combn. in Endotussin NN syr., p. 600.

Homatropine methylbromide, see combns. in Endotussin NN ped. syr., p. 600; in Hycomine comp. tabs., p. 744.

Humatin Kapseals, p. 382.



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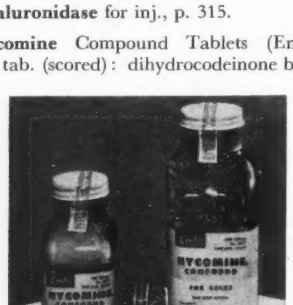
Humatin sensitivity discs, p. 677.
Hyaluronidase for inj., p. 315.

Hycomine Compound Tablets (Endo). Per tab. (scored): dihydrocodeinone bitar-



trate 5 mg., homatropine methylbromide 1.5 mg., chlorpheniramine maleate 2 mg., phenylephrine HCl 10 mg., acetaminophen 250 mg., caffeine 30 mg. For relief of allergic and nonallergic symptoms of respiratory tract infections. *Dosage:* 1 tab. q.i.d.; children 6–12 yrs., 1/2 tab., q.i.d.; 2–6 yrs., 1/2 tab. b.i.d. Bottles: 100, 500, 1000. Class B narcotic. ℞.

Hydrochlorothiazide, see HydroDiuril-Ka tabs., p. 602; see combns. in Cyclex tabs., p. 522; in Esidrix-K tabs., p. 600.
Hydrochlorothiazide NND, p. 602.
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Hydrocortisone acetate, see Rectal Medicone-HC suppos., p. 390; combns. in Aquacort Supprettes, p. 596; in Pansteroid oint., p. 454.
Hydrocortisone alcohol, see Supertah H-C oint., p. 391; cream, p. 456; combn. in Es-A-Cort lot., p. 677.
Hydrocortisone-21-phosphate disodium salt, see Hydrocortone phosphate inj., p. 525.
Hydrocortone phosphate inj., p. 525.
HydroDiuril (Merck S&D), see hydrochlorothiazide NND, p. 602.
HydroDiuril-Ka tabs., p. 602.
Hydroflumethiazide, see combn. in Salutensin tabs., p. 530.
Hydroquin compound oint., p. 383.
Hydroxyprogesterone caproate, see Delalutin 2X inj., p. 449; combn. in Deluteval 2X inj., p. 676.
Hygroton tabs., p. 450.
Hyoscine HBr, see combn. in San-naus tabs., p. 390.
Hyoscyamine sulfate, see combn. in Robaxisal-PH tabs., p. 682.
Hypaque sodium oral liq. and oral powd., p. 602.

Ilosone Pulvules and Ilosone sulfa tabs. (Lilly) now contain the more acid-stable lauryl sulfate form of Ilosone (propionyl erythromycin ester lauryl sulfate). Appearance remains the same. Old formula stocks are replaced at no cost to retailer, hospital, and wholesaler.

Imferon inj. withdrawn, p. 383.
Inpersol soln., p. 678.
Insect antigen, combined, p. 450.
Iodonated glycerol, see Organidin elix., p. 528.
Iodopropylidene glycerol complex, see Organidin elix., p. 528.
Ircon tabs., p. 525.
Iron carbohydrate complex, see Jefron elix., p. 744.
Ismelin sulfate tabs., p. 602.
Isobutylallylbarbituric acid, see combn. in Fiorinal caps., p. 743.
d-**Isoephedrine,** see combn. in Disophrin tabs., p. 524.
d-**Isoephedrine sulfate,** see combn. in Coricidin D liquid, p. 742.
Isopto Cetapred susp., p. 451.
Isopto Mydrapred susp., p. 451.
Isopto prednisolone susp., p. 451.

Jefron Elixir (Pitman-Moore). Per tsp.: iron carbohydrate complex equiv. to Fe 100 mg. For prevention and treatment of iron deficiency anemia. *Dosage:* 1–2 tsps. daily. Bottles: 8 oz. ℞.

Kanamycin sulfate NND, p. 678.
Kantrex (Bristol), see kanamycin sulfate NND, p. 678.
Kanulase tabs., p. 383.
Kaolin, see combn. in Kathmajel tabs., p. 451.
Kaolin-pectin mixture, see combn. in Donnagel-PG susp., p. 449.
Karidium tabs., p. 451.
Kathmajel tabs., p. 451.
Kelatrate syr., p. 383.
Kenalog in Orabase, p. 383.
Kynex acetyl drops, p. 525.

Lida-Mantle Creme (Dome) contains lidocaine HCl in Acid Mantle vehicle. Local anesthetic for itching or pain associated with eczemas, abrasions, pruritus ani, minor burns, herpes zoster, etc. *Application:* Liberally as needed. Tubes: 1/2 and 1 oz. O-t-c.

Lidocaine HCl, see Lida-Mantle creme, p. 744.
Lipo-nicin tabs., p. 383.
Listacort tabs., p. 451.
Lucanthone HCl tabs., p. 678.
Lucidon tabs., p. 526.
Lycol elix., p. 383.
L-**Lysine,** see combn. in Lycol elix., p. 383.
L-**Lysine HCl,** see combn. in Pan-lysine drops, tabs., tonic, p. 386.

Madribon, see sulfadimethoxine NND, p. 391.
Madriqid, see sulfadimethoxine NND, p. 391.
Magnesium aluminate, hydrated, see Riopan tabs. and susp., p. 682.
Magnesium oxide w/activated charcoal and tannic acid, see Anti-dose powd., p. 445.
Magnesium trisilicate, see combn. in Kathmajel tabs., p. 451.
Margel susp. and tabs., p. 451.
Masobarb tabs., p. 451.
Masodonna tabs., p. 451.

Measles Vaccine of attenuated virus that causes "9-day" measles (rubeola) immunized 86 percent of 231 school children, reported Dr. F.E. McCrumb of the University of Maryland. The vaccine for the trials was supplied by Philips Electronics and Pharmaceutical Industries Corporation. The vaccine was administered by injections, or as nose drops or aerosol spray. The vaccine is not available commercially. Clin.

Medalac tabs., p. 384.
Medatinic tabs., p. 384.
Medrol acetate veriderm oints., p. 526.
Medrol eye-ear drops, p. 526.
Medrol Medules caps., p. 526.
Medrol w/Orthoxine tabs., p. 678.

Mellaril tabs. 50 mg. are now available from Sandoz. Tabs. containing 10, 25, or 100 mg. thioridazine HCl also are available.

Mepivacaine HCl, see Carbocaine HCl sterile solns., p. 448.
Meprobamate, see combns. in Cyclex tabs., p. 522; in Deprol tabs., p. 379; in Equagesic tabs., p. 524.
Mer/29 caps., p. 452.
Mervaldin, Lannett's new brand name for mephenesin.
Methakote pediatric creme, p. 384.
Methamphetamine HCl, see combns. in Desbutal Gradumet tabs., p. 676; in Res-o-phyllin caps., p. 390; in San-naus tabs., p. 390.
Methandrostenolone, see Dianabol tabs., p. 380.
Methapyrilene HCl, see combns. in Darbacin caps., p. 449; in Optophed soln., p. 528.
Methdilazine HCl, see Tacaryl tabs. and syr., pp. 391 and 531.
Methiodal sodium, see combn. in Retropaque soln., p. 530.
Methocarbamol, see combn. in Robaxisal tabs., p. 390; in Robaxisal-PH tabs., p. 682.
Methohexital sodium, see Brevital sodium for inj., p. 598.
d-**Methorphan HBr,** see combn. in Tussar syr., p. 607.
Methoxyphenamine HCl, see combn. in Medrol w/Orthoxine tabs., p. 678.

Methoxypromazine maleate NND (Tentone maleate); 2-methoxy-10-(3′-dimethylaminopropyl)phenothiazine maleate. The compound differs chemically from chlorpromazine only by replacement of the chlorine atom by a methoxy group. The biological actions of the two compounds are similar and so are the therapeutic uses. Early reports indicate the new compound has less troublesome side effects. The Parkinson-like syndrome sometimes seen with other phenothiazine derivatives is rare and has occurred only when large doses were used. See *J. Am. Med. Assn.*, **172,** 1519 (Apr. 2, 1960).

Methscopolamine resin complex, see Akalon-T caps., p. 445.
Methylcellulose, see combns. in Isopto Cetapred susp., p. 451; in Isopto Mydrapred susp., p. 451; in Isopto prednisolone susp., p. 451.

Methylprednisolone, see Medrol eye-ear drops, p. 526; Medrol Medsules caps., p. 526; in Neo-Medrol eye-ear drops and oint., p. 526.

Methylprednisolone acetate NND, p. 384; see Medrol acetate Veriderm oints., p. 526; Depo-Medrol susp., p. 522; combns. in Neo-Medrol acetate Veriderm oints., p. 526.

6α-Methylprednisolone-21-acetate, see methylprednisolone acetate NND, p. 384.

Methylprednisolone HCl, see combn. in Medrol w/Orthoxine tabs., p. 678.

Methylprednisolone sodium succinate NND, p. 384.

Methyltestosterone, see combns. in Android tabs., p. 374; in Andro-Wolfia tabs., p. 376; in Gevrestin caps., p. 450; in Lucidon tabs., p. 526.

Metrecal Liquid (Mead Johnson). Each 8-oz. can of liquid provides 225 calories. The powder form also is available.

Monalium hydrate, see Riopan tabs. and susp., p. 682.

Monopotassium pamoate, source, p. 452.

Mysoline tabs., p. 384.

Mysteclin-F caps., p. 679.

Nalertan tabs., p. 384.

Neograv tabs., p. 452.

Neo-Mantle creme and lot., p. 384.

Neo-Medrol acetate veriderm oints., p. 526.

Neo-Medrol eye-ear drops and oint., p. 526.

Neomycin, see combns. in Neo-Diloderm topical forms, p. 526; in Neo-Medrol acetate Veriderm oints., p. 526.

Neomycin sulfate, see Neo-Mantle creme and lot., p. 384; Neopan cream, p. 679; combns. in Decaspray aerosol, p. 526; in Neo-Medrol eye-ear drops and oint., p. 526; in Retropaque soln., p. 530; in VAD w/neomycin cream, p. 683.

Neopan cream, p. 679.

Niacin, p. 452, see combn. in Lucidon tabs., p. 526.

Niacinamide w/nicotinic acid and vits. B_1, B_2, B_6 and C in Lipo-nicin tabs., p. 383.

Niapent caps., p. 452.

Nicalex tabs., p. 452.

Nico-Metrazol elix. and tabs., p. 604.

Nicotinic acid, see Medatinic tabs., p. 384.

Nicotinic acid w/amide and vits. B_1, B_2, B_6 and C in Lipo-nicin tabs., p. 383.

Nitroglycerin, see combn. in Penite sustained caps., p. 528.

Noscapine, see combn. in Coryz tabs., p. 676.

Nystatin, see combn. in Declostatin caps., p. 676.

Opium, powdered, see combn. in Donnagel-PG susp., p. 449.

Optophed soln., p. 528.

Orabase, see Kenalog in Orabase, p. 383.

Orabase emollient paste, p. 386.

Oretic (Abbott), see hydrochlorothiazide NND, p. 602.

Organidin elix., p. 528.

Ornade Spansule caps. (S.K.&F.) now in bottles of 250 and 30.

Os-Cal, Os-feo-Vim and Os-Vim tabs., p. 386.

Ostamar kit, p. 528.

Ostensin (Wyeth), see trimethidinium methosulfate NND, p. 747.

Os-Vim tabs. (Marion) now contain no folic acid. O-t-c.

Oxanamide NND, p. 386.

Ox bile ext., see combn. in Kanulase tabs., p. 383.

Oxylone, see fluorometholone NND, p. 382.

Oxyphencyclimine HCl, p. 680.

Oxyphenonium bromide, see Antrenyl bromide inj., p. 445.

Paadon caps., p. 680.

Palcillin inj., p. 386.

Panac tabs., p. 386.

Pancreatic enzymes w/standardized lipase (steapsin) activity, see Cotazym caps., p. 522.

Pancreatin, see combn. in Kanulase tabs., p. 383.

Pan-lysine drops, tablets, tonic, p. 386.

Pansteroid oint., p. 454.

Panthenol, see pantothenylol.

Pantothenylol, see combn. in Neopan cream, p. 679.

Pantrinsic tabs., p. 386.

Pantrinsic-C tabs., p. 386.

Pantrinsic PN caps., p. 386.

Panvitex prenatal caps., p. 454.

Paromomycin, see Humatin Kapseals, p. 382; Humatin sensitivity discs, p. 677.

Pectin, see combn. in Polymagma tabs., p. 606.

Pelargonic acid, see combn. in Pellar oint. and powd., p. 528.

Pellar oint. and powd., p. 528.

Penicillin G potassium, buffered crystalline, see Flavocillin for oral soln., p. 450.

Penicillin, α-phenoxyethyl, potassium, see potassium phenethicillin.

Penicillin S-R w/streptomycin for susp., p. 528.

Penicillin sodium, buffered crystalline, see combn. in Strep-Dicrystin fortis for inj., p. 530.

Penicillin-streptomycin Readimixed sterile aq. susp., p. 387

Penicillin w/antihistaminic, p. 387.

Penite sustained caps., p. 528.

Pentaerythritol tetranitrate, see Pentryate tabs., p. 454; combn. in Penite sustained caps., p. 528.

Pentobarbital, see combn. in Synirin tabs., p. 456.

Pentobarbital sodium, see combns. in Desbutal Gradumet tabs., p. 676; in Tymafast caps., p. 456.

Pentobarbital sodium w/niacinamide, see Niapent caps., p. 452.

Pentryate tabs., p. 454.

Pentylenetetrazol, see combn. in Lucidon tabs., p. 526.

Pepsin, see combns. in Beldase caps., p. 448; in Kanulase tabs., p. 383.

Permitil Chronotab tabs., p. 528.

Phenacetin, see combn. in Robaxisal tabs., p. 682.

Phenethicillin is α-phenoxyethylpenicillin.

Phenethicillin potassium, see potassium phenethicillin.

Phenethylbiguanide HCl, see DBI tabs., p. 606.

Phenformin HCl, see DBI tabs., p. 598.

Phenformin HCl NND, p. 680.

Pheniramine maleate, see combns. in Corizahist tabs., p. 448; in Darbacin caps., p. 449; in Tussar syr., p. 607; in Synergen liq., p. 683; in Tain inlay-tabs., p. 745.

Phenmetrazine HCl w/vitamin-mineral combn., see Prelu-Vite caps., p. 529.

Phenobarbital, see combns. in Bellabil tabs., p. 376; in Bronkotab elix., p. 520; in Donnagel-PG susp., p. 448; in Masodonna tabs., p. 451; in Quakedrin tabs., p. 455; in Robaxisal-PH tabs., p. 682.

Phenobarbital w/niacinamide, see Masobarb tabs., p. 451.

Phenylephrine HCl, see combns. in Corizahist tabs., p. 448; in Covanamine liq., p. 522; in Covanamine expectorant, p. 745; in Hycomine comp. tabs., p. 744; in Isopto prednisolone susp., p. 451; in Optophed soln., p. 528; in Res-ophyllin caps., p. 390; in Synergen liq., p. 683; in Thorphan C.F. tabs., p. 683.

Phenylephrine HCl w/antihistaminics and APC combn. in Darbacin caps., p. 449.

Phenylephrine tannate, see combn. in Rynatuss Tabules and susp., p. 682.

Phenylmercuric acetate, see combn. in Aquacort Supprettes, p. 596.

Phenylpropanolamine, see combn. in Coryz tabs., p. 676.

Phenylpropanolamine HCl, see combns. in Coplexen liq., p. 745; in Covanamine liq., p. 522; in Covanamine expectorant, p. 742; in Propamine caps. and syr., p. 455; in Tain inlay-tabs., p. 745; in Synergen liq., p. 683; in Thorphan C.F. tabs., p. 683; in Tussar syr., p. 607.

Phenyltoloxamine dihydrogen citrate, see combns. in Algic tabs., p. 606; in Estril tabs., p. 449; in San-naus tabs., p. 390; in Trilamine Ty-Med tabs., p. 392.

Phospholine iodide for soln., p. 680.

Phytonadione, see AquaMephyton inj., p. 596.

Piminodine ethanesulfonate, see Alvodine ethanesulfonate amps. and tabs., p. 745.

Pipamazine NND, p. 529.

Piperidolate HCl, see combn. in Dactil-OB tabs., p. 676.

Pipethanate hydrochloride NND, p. 529.

Polaramine maleate (Schering), see dexchlorpheniramine maleate NND, p. 600.

Polycarbophil, see combn. in Sorboquel tabs., p. 455.

Polymagma tabs., p. 606.

Polymyxin B sulfate, see combn. in Polymagma tabs., p. 606.

Polysaccharide-iron complex, see Feraplex liq., p. 600.

Potassium chloride, see combns. in Esidrix-K tabs., p. 600; in Rautrax-N tabs., p. 522.

Potassium iodide, see combn. in Quakedrin tabs., p. 455.

Potassium oleate and stearate, see combn. in Rectalad miniature enema, p. 390.

Potassium permanganate, p. 681.

Potassium phenethicillin (potassium α-phenoxyethyl penicillin); see Alpen tabs. and for oral soln., p. 374; Darcil tabs., p. 379; Dramcillin-S for oral liq., p. 380; Ro-Cillin tabs. and for oral soln., p. 530; Semopen tabs. and powd. for oral soln., p. 682.

Potassium α-phenoxyethyl penicillin see potassium phenethicillin.

Povidone-iodine complex, see Betadine aerosol spray, p. 309.

Pred-Kam Tablets (First Texas). Per tab. (scored): prednisolone 5 mg., dihydroxyaluminum aminoacetate (Alkam) 300 mg. In conditions responsive to corticosteroid therapy. The antacid is included to counteract G.I. symptoms and peptic ulcer tendency during steroid therapy. *Dosage:* 1 tab. t.i.d. for 1st wk., reduce to 2 tabs. daily during 2nd wk., then 1 tab. daily for maintenance. Withdraw medication gradually. Bottles: 30, 100. ℞.

Prednisolone, see Ulacort tabs., p. 456; see combns. in Isopto Cetapred susp., p. 451; in Isopto Mydrapred susp., p. 451; in Isopto prednisolone susp., p. 451; in Pred-Kam tabs., p. 746; in Somacort tabs., p. 682.

Prednisone, see Listacort tabs., p. 451; combns. in Aspred-C tabs., p. 376; in Esteril tabs., p. 449.

Prelu-Vite caps., p. 529.

Primaquine phosphate, see combn. in Camoprim tabs. and Infatabs, p. 676.

Prime-Avite drops, p. 681.

Probenecid, see combn. in ColBenemid tabs., p. 522.

Procaine penicillin G, see combns. in Palcillin inj., p. 386; in Strep-Crysdimycin A-S inj., p. 530; in Strep-Dicrystin fortis for inj., p. 530.

Procaine penicillin G, crystalline, see combns. in penicillin-streptomycin Readimixed aq. susp., p. 387; in Strep-Combiotic Steraject inj., p. 530.

Prodox drops and tabs., p. 529.

Progestroid tabs., p. 388.

Prolixin inj., p. 681.

Proloxin now Mervaldin (Lannett) for mephenesin and its dosage forms.

Propamine caps. and syr., p. 455.

Propanediol diacetate, see combn. in VoSol otic soln., p. 457.

Propionyl erythromycin ester lauryl sulfate, see Ilosone Pulvules and w/sulfa tabs., p. 746.

Protalba (Pitman-Moore), see protoveratrine A NND, p. 606.

Prothipendyl HCl, see Timovan tabs., p. 392.

Protokylol HCl NND, p. 606.

Protoveratrine A NND, p. 606.

Protoveratrine A, see combn. in Salutensin tabs., p. 530.

Purivax polio vaccine, p. 681.

Pyraldine and Pyraldine No. 2 (VanPelt & Brown) formulas are changed by replacement of dihydrocodeinone bitartrate with dextromethorphan HBr 90 mg. per fl. oz. Non-narcotic. ℞.

Pyridoxine HCl, see combn. in San-naus tabs., p. 390.

Pyrilamine maleate, see combns. in Corizahist tabs., p. 448; in Covanamine liq., p. 522; in Covanamine expectorant, p. 746; in Darbacin caps., p. 449; in Endotussin NN syr., p. 600; in Tain inlay-tabs., p. 746; in Synergen liq., p. 683; in Trilamine TyMed tabs., p. 392.

Quakedrin tabs., p. 455.

Quiactin, see oxanamide NND, p. 386.

Quinolor compound oint., p. 390.

Racephedrine HCl, see combn. in Algic tabs., p. 596.

Radio-Hippuran soln., p. 682.

Radio-iodohippurate sodium, see combn. in Radio-Hippuran soln., p. 682.

Radio-L-triiodothyronine, see Triomet soln., p. 683.

Rautrax-N and —modified tabs., p. 530.

Rauwolfia serpentina, see combns. in Andro-Wolfia tabs., p. 376; in Rautrax-N and —modified tabs., p. 530.

Rectalad miniature enema, p. 390.

Rectal Medicone-HC suppos., p. 390.

Rediplete ADC drops, —polyvitamin drops, —pediatric syr., p. 390.

Renografin inj., p. 606.

Reserpine, see combns. in Estro-Serp tabs., p. 382; in Penite sustained caps., p. 528; in Salutensin tabs., p. 530.

Res-o-phyllin caps., p. 390.

Retropaque soln., p. 530.

Riopan tabs. and susp., p. 682.

Robaxisal tabs., p. 390.

Robaxisal-PH tabs., p. 682.

Ro-Cillin tabs. and for oral soln., p. 530.

Rubrafer vet. inj., p. 530.

Rynatuss tabs. and susp., p. 682.

Safflower oil, see Delbenol caps. and emulsion, p. 379.

Salicylamide, see combns. in Aspred-C tabs., p. 376; in Dipralon forte tabs., p. 380.

Salicylic acid, see combn. in Domerine medicated shampoo, p. 380.

Salutensin tabs., p. 530.

San-naus tabs., p. 390.

Scopolamine HBr inj., p. 455.

Sebical cream, —shampoo, p. 455.

Semopen tabs. and powder, p. 682.

Septiderm and Septiderm-HC creams, p. 530.

Sinaxar (Armour), see styramate NND, p. 682.

Sodium 6α-methylprednisolone-21-succinate, see methylprednisolone sodium succinate NND, p. 384.

Sodium fluoride, see T-Fluoride tabs., p. 456.

Sodium iodohippurate (I^{131}), see Radio-Hippuran soln., p. 682.

SoluMedrol, see methylprednisolone sodium succinate NND, p. 384.

Somacort tabs., p. 682.

Sorboquel tabs., p. 455.

Staphcillin (Bristol) is 2,6-dimethoxyphenylpenicillin. The new compound, which has been reported to be effective against staphylococci, particularly *Staph. aureus* infections, was produced at Bristol Labs. and is a result of co-operative research in synthetic penicillins by Bristol and Beecham (British) researchers. The new compound appears to resist destruction by penicillinase, an enzyme produced by bacteria and which destroys penicillin G. Clin.

Stelazine tabs. (S.K.&F.). Tabs. containing 2 mg. trifluoperazine are now in bottles: 500 and 50.

Storcavite Tablets (Roerig) now contain ferrous fumarate in place of reduced iron, B_{12} Stablets in place of crystalline B_{12}, and are film-coated and monogrammed. ℞.

Strep-Combiotic steraject inj., p. 530.

Strep-Crysdimycin A-S inj., p. 530.

Strep-Dicrystin fortis for inj., p. 530.

Streptomycin sulfate, see Penicillin S-R w/streptomycin for susp., p. 528; combns. in Palcillin inj., p. 386; in penicillin-streptomycin Readimixed sterile aq. susp., p. 387; in Strep-Crysdimycin A-S inj., p. 530; in Strep-Combiotic Steraject inj., p. 530; in Strep-Dicrystin fortis for inj., p. 530.

Striatran tabs., p. 682.

Styramate NND, p. 682.

Sulfacetamide sodium, see combn. in Isopto Cetrapred susp., p. 451.

Sulfadimethoxine NND, p. 391.

Sulfinpyrazone NND (Anturan); 1,2-diphenyl - 4 - (2′ - phenylsulfinethyl) - 3,5-pyrazolidinedione. A pyrazolone derivative, chemically related to phenylbutazone, sulfinpyrazone is a potent uricosuric agent which is used primarily in the prevention rather than the treatment of acute gouty arthritis. The severity and frequency of such attacks are reduced by continuous long-term administration of the drug, presumably by virtue of its ability to promote the renal excretion of uric acid. Patients refractory to other uricosuric agents may respond to sulfinpyrazone. Most patients require the concomitant use of colchicine or of other drugs for adequate symptomatic relief, since sulfinpyrazone has only weak, if any, analgesic or anti-inflammatory action. For similar reasons, colchicine, phenylbutazone, and other analgesics are not replaced for the relief of pain and the other manifestations of acute gout. Salicylates, which even in small doses strongly antagonize its uricosuric action, should not be administered with sulfinpyrazone. There is no known contraindication to the conjunctive use of phenylbutazone, probenecid, or zoxazolamine with sulfinpyrazone, however. An acute attack of gouty arthritis is sometimes precipitated shortly after treatment with sulfinpyrazone is begun, and the frequency of acute attacks may be increased for several weeks thereafter. For this reason, the prophylactic administration of colchicine during the first few weeks of treatment has been recommended. The marked increase in urate execretion induced by sulfinpyrazone sometimes provokes urolithiasis and renal colic. In order to minimize the incidence of this complication, eradication of pre-existing urinary tract infections and administration of sufficient fluid and alkali to insure a large volume of alkaline urine are indicated. The drug should be used only with great caution, if at all, in patients with impaired renal function; in such cases, periodic tests of renal function should be performed. Epigastric distress and other gastrointestinal symptoms are among the most frequent complications of treatment with sulfinpyrazone; activation of quiescent peptic ulcer has been reported. Hence, it is suggested that sulfinpyrazone be administered with food, milk, or alkali. The drug is contraindicated in patients

who have, or who have recently had, an active peptic ulcer. See *J. Am. Med. Assn.*, **172,** 1038 (Mar. 5, 1960).

Sulfur, colloidal, see combn. in Pellar oint., p. 528.
Supertah H-C oint., p. 391.
Synergen liq., p. 683.
Synirin tabs., p. 456.
Synnematin B, p. 391.

T and T tabs., p. 456.
Tacaryl tabs. and syr., p. 531.

Tain Inlay-Tabs (Smith-Dorsey). Per tab. (pink inlay): triacetyloleandomycin equiv.

to oleandomycin 125 mg., phenylpropanolamine HCl 12.5 mg., pheniramine maleate 6.25 mg., pyrilamine maleate 6.25 mg., calcium acetylsalicylate carbamide equiv. to aspirin 300 mg. For symptomatic relief of colds and prevention of secondary complications due to oleandomycin-susceptible organisms. *Dosage:* 2 tabs. q.i.d. Bottles: 50. ℞.

Tannic acid w/MgO and activated charcoal, see Anti-dose powd., p. 445.
Tentone maleate (Lederle), see methoxypromazine maleate NND, p. 747.
Tenuate tabs., p. 456.
Tetracycline phosphate complex, see combn. in Mysteclin-F caps., p. 679.
Texacort cream, p. 456.
T-Fluoride tabs., p. 456.
Thenylpyramine HCl, see combn. in Trilamine Ty-Med tabs., p. 392.
Theophylline, see combn. in Bronkotab elix., p. 520.
Theophylline calcium salicylate, see combn. in Quakedrin tabs., p. 455.
Thihexinol methylbromide, see combn. in Sorboquel tabs., p. 455.
Thio-Tepa NND, p. 683.
Thorphan tabs., p. 683.
Thrombolysin Lyovac for inj., p. 531.
Thyroid extract, see combns. in Android tabs., p. 374; in Progestroid tabs., p. 388.
Thyroid w/B_1, see T and T tabs., p. 456.
Tigan HCl, p. 531, see trimethobenzamide HCl NND, p. 747.
Timovan tabs., p. 392.
Tis-u-sol soln., p. 683.
Tolazoline HCl, see Arterodyl TT tabs., p. 520.
Trancoprin tabs., p. 531.
Triacetyloleandomycin, see combn. in Tain inlay-tabs., p. 747.
Triamcinolone acetonide, see Kenalog in Orabase, p. 383.
Triamine-HC tabs., p. 531.
Triburon hydrocortisone cream, p. 531.
Trib suppos., p. 683.
Triclobisonium chloride, see Trib vaginal suppos., p. 683; combn. in Triburon hydrocortisone cream, p. 531.
Trilamine Ty-Med tabs., p. 392.
Trimeprazine, see combn. in Coplexen liq., p. 747.

Trimethidinium methosulfate NND (Ostensin); *d*-[N-methyl-N-(γ-trimethylammoniumpropyl)] - 1 - methyl - 8,8 - dimethyl-3-azabicyclo[3.2.1] octane dimethosulfate. A quaternary ammonium compound used in the treatment of hypertension. Its clinical use should be restricted to those patients with moderate to severe forms of diastolic hypertension who fail to respond adequately to therapy less drastic than ganglionic blockade. Ganglionic blocking agents should not be given for mild, labile hypertension. When indicated, orally administered trimethidinium will usually lower both systolic and diastolic blood pressure. The adjunctive use of chlorothiazide or reserpine may afford additional symptomatic relief and allow for reduction in the daily dose of trimethidinium. Tolerance to trimethidinium may occasionally develop after a stage of initial sensitivity; in such cases, however, if therapy is continued and the dose gradually increased, usually an antihypertensive effect can again be produced. Therapy with trimethidinium should be undertaken cautiously, with the realization that the drug is capable of producing the full spectrum of pharmacological side effects referable to ganglionic blockade. These include blurring of vision, postural hypotension, dryness of the mouth, constipation, interference with sex functions, weakness, nervousness, malaise, dizziness, and headache. Present evidence indicates that trimethidinium causes visual disturbances more often than do mecamylamine or hexamethonium. It shows a lower incidence and severity of certain other side effects, such as constipation and paralytic ileus, common to other ganglionic blocking agents. The drug should be administered cautiously, if at all, in the presence of marked renal insufficiency, especially when there is elevation of blood nonprotein nitrogen levels. Patients with coronary insufficiency, recent myocardial infarction, cerebral thrombosis, and severe, generalized atherosclerosis should not be treated by ganglionic blockade. Other contraindications to the drug include glaucoma, organic pyloric stenosis, bleeding peptic ulcer, and uremia. See *J. Am. Med. Assn.*, **172,** 1039 (Mar. 5, 1960).

Trimethobenzamide HCl, see Tigan HCl, p. 531.

Trimethobenzamide HCl NND (Tigan HCl); N-(dimethylamincethoxybenzyl)-3,4,5-trimethoxybenzamide HCl. The relatively few comparative clinical studies reported indicate that the drug has significant antiemetic activity. Effects appear within 20–40 minutes after either oral or i.m. administration and persist for 3–4 hrs. Insufficient data have been reported to clearly establish the drug's apparent freedom from serious toxicity or the frequency of minor side effects. It is reported to be helpful in alleviating nausea and reducing the frequency of vomiting in the immediate postoperative period; in pregnancy; in motion sickness; in intoxication from digitalis, nitrogen mustard, and other drugs; and in such pathological conditions as malignancy, hepatitis, cholecystitis, uremia, alcoholic gastritis, labyrinthine disease, and radiation sickness. See *J. Am. Med. Assn.*, **172,** 1040 (Mar. 5, 1960).

Triomet soln., p. 683.
Triparanol, see Mer/29 caps., p. 452.
Trypsin, see Tryptest inj., p. 456; combn. in Chymoral tabs., p. 379.
Tryptest inj., p. 456.
Tuazole (2-methyl-3-*o*-tolylquinazolone), see combn. in Akalon-T caps., p. 445.
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Twiston, p. 456.
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Tyrothricin, see combn. in Aquacort Suppettes, p. 596.

Ulacort tabs., p. 456.
Ulcetrol tabs., p. 531.

ULO Syrup (Riker). Per 5 ml.: 25 mg. chlophedianol HCl, 1-phenyl-1-(1-chlorophenyl) - 3 - dimethylaminopropanol - (1) HCl. An antitussive agent for use in upper respiratory infections, colds, pneumonia, influenza, pleurisy, etc. *Dosage:* Orally, 3–4 times daily as required. 25 mg.; children 6–12 yrs. 12.5–25 mg., 2–6 yrs. 12.5 mg. Bottles: 12 oz. ℞.

Undecylenic acid, see combns. in Desenex aerosol, p. 449.
Universal antidote, see Anti-dose powd., p. 445.

Ureaphil for Injection (Abbott). The lyophilized urea is dissolved in 5% dextrose or invert sugar soln. for i.v. administration to promote diuresis following surgery, burns or other trauma (4% urea soln.) or where there is a marked rise in intracranial pressure (30% urea soln.). *Dosage:* Only by slow i.v. infusion (drip) at not more than 60 drops per minute. Total daily dose should not exceed 120 Gm.; children, amount according to body wt. and volume given in proportion to surface area. Caution in presence of liver or kidney disease; watch electrolyte balance of patient. Powder 40 Gm. in 250-cc. Abbo-Liter bottle. Also transfer set.

Vaccine (diphtheria, tetanus, polio and pertussis), see Compligen vaccine, p. 522.
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Vigran Liquid (Squibb) supplies in each tsp. (orange) at least 125% of minimum daily requirements for vits. A, D, B_1, B_2, C, niacinamide with other vitamins as a prophylactic against vit. deficiencies, particularly in children. Bottles: 8 oz. O-t-c.

Vi-Sorbin Liquid (S.K.&F.) is now ℞ and conversion labels are supplied by SKF. The recommended daily dosage of

15 cc. supplies 1.5 mg. folic acid in addition to Fe, vits. B_{12} and B_6 with D-sorbitol.

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